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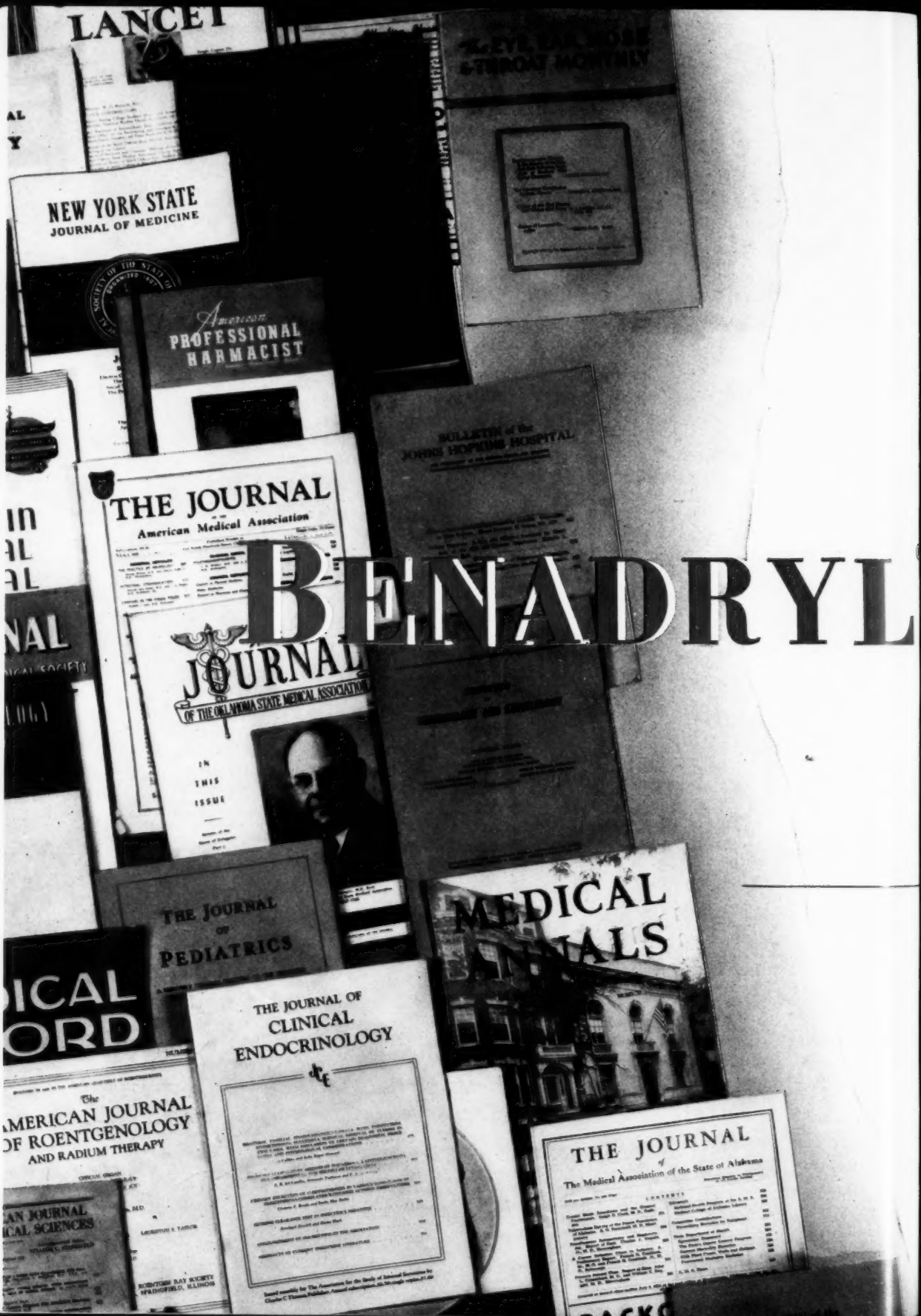
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BENADRYL

The Law Relating to Medico-Legal Autopsies in the Territory of Hawaii

ALVIN V. MAJOSKA, M.D.
HONOLULU

SINCE THE creation of the position of City and County Pathologist on January 1, 1945, for the purpose of placing into the hands of one qualified person the responsibility of performing autopsies for the City and County of Honolulu, there has been a gradual realization of the necessity for a complete revision of the law, insofar as coroner's autopsies are concerned. An investigation has revealed that present practices are based largely on various individuals' notions regarding mainland or local precedent, rather than on knowledge of—or, indeed, existence of—pertinent laws. It is intended that this report will clarify and criticize, constructively, the present system.

Existing Laws in Hawaii

There are few paragraphs of law and Board of Health regulations relating to coroner's autopsies in the Territory of Hawaii. The only ones the writer has been able to find are as follows:

Public Health Regulations of the Board of Health

Section 169, Para. 3. In the case of a death without medical attendance, or continued absence of the attending physician for at least forty-eight hours, it shall be the duty of the undertaker, or person acting as such to notify the coroner of such death and the coroner shall thereupon refer the case to the *proper health officer* [italics mine] for investigation and certification to a standard certificate of death required for a burial permit. The health officer shall state in the certificate the disease causing death, or if the death be from external cause (1) the manner and means of death and (2) whether accidental, suicidal or homicidal. Only when the coroner is unable to cause a certificate of death to be prepared as required by law, then, and then only, shall the registrar prepare the standard certificate of death upon the proper application of and statement, under oath, of the nearest relative, or guardian, and of at least two witnesses having adequate knowledge of the fact of death. All affidavits shall be filed with the local registrar and later filed by him with the Registrar General at the close of the month.

Revised Laws of Hawaii 1945

Section 10913. Autopsies to be performed. The Coroner shall have a complete autopsy performed of the remains of any human body appearing to have come to death by poisoning, violence, or *in any suspicious manner* [italics mine]. Such autopsies shall be performed by the City and County Physician or his assistant in the City and County of Honolulu and in other counties by any government physician designated by the Coroner. Such physician may request the services of a recognized pathologist to assist in the performance of any autopsy. If the Coroner is of the opinion that further or additional investigation as to the cause of death shall be made, he shall have authority to have the same made, the expenses of which shall be paid by the county concerned.

Section 3123, Para. 3. There shall be a standard certificate of death, the form and contents of which shall be prescribed by the board, and it shall be the duty of the registrar to make out said certificate when the report of death is from a source other than an attending physician or surgeon; and when the report of death is by an attending physician or surgeon such certificate shall be made out and signed by such physician or surgeon.

Revised Instructions to the Government Physicians and Registrars

(Approved at a regular meeting of the Board of Health held October 28, 1943).

Section 1. Autopsies—unattended deaths.

1. Government physicians shall perform *complete autopsies in all cases* [italics mine] in which the certificate of death shows the cause of death to be unsatisfactory or unknown.

2. Government physicians, in the case of deaths without medical attendance (or continued absence of the attending physician for at least forty-eight hours), shall perform a complete autopsy in all cases referred to them by the Coroner for view and immediate inquiry, if a definite cause of death cannot be ascertained after viewing the body and making a close investigation into the cause of death.

3. The government physician shall not approve the certificate of death as required for a burial or cremation permit nor shall the burial or cremation permit be issued unless the certificate of death shall have been approved by the Office of the Coroner and countersigned by the *coroner's physician* [italics mine], if the death was unattended, even though the attending physician assumed the full responsibility up to the time of death as certified to the cause of death.

Comments

Analyzing these laws and regulations we find the following *readily* apparent flaws:

1. Section 169, Paragraph 3 of the Public Health Regulations of the Board of Health—who is the "proper health officer" to whom a death shall be referred by the Coroner? The position is nowhere defined in the law. The death is therefore referred to a mythical individual. Yet his duties in connection with the death are clearly defined!

2. Section 10913 of the Revised Laws of Hawaii 1945—"in any suspicious manner." This

nebulous term is much too poorly defined. There *must be evidence* to substantiate "suspicious manner"—there is considerable legal precedent for this important statement. An autopsy done without *evidence* of "suspicious manner" is performed illegally and performance of such autopsy in good faith provides no immunity from subsequent prosecution and civil suit.

3. Section 3123, Paragraph 3 of the Revised Laws of Hawaii 1945. The question as to who signs the death certificate in the event of an unattended death, not within the jurisdiction of the Coroner, has arisen in the past. The answer to the question was recently found, after a very prolonged search, tucked away in this paragraph.

4. Revised Instructions to the Government Physicians and Registrars. Section 1, Paragraph 1. There is no leeway given the government physician to decide as to when an autopsy is necessary and when one is not necessary. It becomes mandatory for the government physician to perform a complete autopsy in all cases in which the certificate of death is unsatisfactory. It denies the physician the right to exercise his good judgment as to whether or not an autopsy is indicated and necessary. Furthermore, it is impossible to define what constitutes a "complete" autopsy. In the writer's opinion, a complete autopsy is an utter absurdity and impossibility, because regardless of how complete the autopsy may be, there are invariably other studies which might have been performed. The cost of a truly complete autopsy would be a staggering sum and one which the community could not bear. The paragraph fails to state the *purpose* of a complete autopsy. Further, this paragraph instructs the government physician to do something which he is not *lawfully empowered* to do!

Paragraph 3. This paragraph outlines the duties of the "coroner's physician"; yet such a position is nowhere defined nor does anyone know who the "coroner's physician" is!

Current Problems and Misconceptions

1. Uninformed members of the medical profession believe, for the most part, that should a death occur in a hospital within twenty-four hours (some believe forty-eight hours) of admission, the case must be investigated by the Coroner; or, in common parlance, that a "coroner's case" has been established. There is no such regulation in the Territory. The desirability of such a law will be later discussed.

2. Physicians, anxious to have an autopsy performed on their own cases, but unable to secure legal permission for performance of such autopsy, decide to "make it a coroner's case." Under the law a case is or is not a coroner's case on the basis of its own circumstances, not on the basis of someone's opinion. This, to some extent, is as it should be, but the present law does not provide for a sufficient number of situations in which a medicolegal autopsy should be performed.

3. Proper disposition of bodies in special circumstances is difficult and the procedure is unwieldy. This applies particularly to decomposed bodies which are found outside of business hours. The post-mortem examination is done as soon as possible, almost as a matter of semi-emergency, but the body, already a menace to the public health, cannot, under present circumstances, be immediately cremated because: (a) one must first ascertain who is to pay for the cremation; (b) the Office of the Coroner may be closed so that a release may not be available; (c) other unforeseen factors.

There is a definite lack of knowledge of procedure in such cases. I believe that the autopsy surgeon should have the authority to order—not merely request—a cremation forthwith, the financial and detailed secretarial work to be done later, and in those cases where private funds are unavailable, the government should be mandated to pay the bill.

4. Availability and securing of reports need clarification. The law should clearly state what agencies are entitled to copies of autopsy reports and upon whom rests the responsibility of deciding whether reports are to be made available to such agencies.

5. Jurisdiction in federal cases is not clearly defined. It is understood that certain suspicious or violent deaths occurring outside of military or government reservations are coroner's cases. Yet the Army frequently assumes jurisdiction and does not even report its findings to the Coroner's Office. Although a copy of autopsy findings is usually forwarded upon request, there are instances wherein the Army has completely failed in this obligation.

6. Although the present law clearly states that an autopsy shall be performed on the remains of any human body appearing to have come to death by violence, a recent violent death was not autopsied because of pressure brought to bear by the family of the deceased. An autopsy probably was not needed in this case but the present law *leaves no choice*. It states that an autopsy is mandatory in such cases.

7. There is considerable confusion regarding the requirement for autopsies in coroner's cases. The general opinion is that if a case is investigated by the Coroner it will thereafter be autopsied by

the City and County Pathologist. This is not true, as only those cases where death is due to violence, poisoning or in a suspicious manner, may be, and are, required to be autopsied. Although unattended deaths are investigated by the Coroner's Office, there is no legal justification for such jurisdiction. The duties of the Coroner are clearly outlined in Section 10903 of the Revised Laws of Hawaii 1945 and this paragraph states that the Coroner shall investigate "death by poisoning, violence or in any suspicious manner." By precedent, not by authority of law, unattended deaths are actually investigated by the Coroner's Office. These cases are not necessarily autopsied; they are usually merely released to the family for disposition.

8. The availability of hospital records and other information necessary in the investigation of a death is poor. In a specific instance recently encountered there was a suggestion of crime in connection with a certain death. Yet no one had the authority or power to investigate the hospital record in that case, as the hospital demanded a court subpoena for the record, and rightfully so. A subpoena could not be obtained until the following morning. Many hours of time could be lost in the apprehension of a criminal in future similar situations. The investigator (whoever he may be) should have more legal authority to perform adequate investigation. As Hayt says, "The public authorities in charge of the enforcement of the criminal law shall have the right to pertinent information concerning any patient from any hospital upon satisfying the hospital that it is reasonably pertaining to a bonafide criminal investigation."* This is the law as it exists in the state of New Jersey.

There should be no reticence on the part of the hospital to supply such information. If a physician is considered qualified to perform a medico-legal necropsy, he should be presumed to be of sufficient integrity to permit his perusal of pertinent hospital data. He might be required to sign a form stating that his examination of a certain record was in the line of official duty (in order to protect the hospital) and he should have certain credentials, such as a card or a badge or both, to present to the hospital to verify his authority to request information.

9. Release of information to newspaper should be controlled by statute. Medical information desired by newspapers must be channeled through the office of a lay person under the present rules, regulations and laws. The decision as to whether certain *medical* information should be released should not rest in the hands of a lay person but should be the duty of a physician. Second hand medical information, passed through the hands of a lay person, is usually inaccurate and might be damaging in the event of a medico-legal autopsy.

* *Some Aspects of the Confidential Character of the Hospital Medical Record* by Emanuel Hayt, LL.D., published in "Hospital Progress," 1946.

Current Procedures

The status of procedure in the event of deaths occurring in the Territory of Hawaii at the present time may be summarized as follows:

1. The death occurs under conditions supposed [the law does not specify by whom] to involve poisoning, violence or suspicious circumstances. These deaths (whether or not attended by a physician or surgeon) are investigated by the Coroner or Deputy Coroner and if the death does appear to be due to any of these factors (after a complete investigation) the Coroner has an autopsy performed. If, after the investigation, it is found that there is no evidence to indicate poisoning or violence [i.e., any external trauma], the case comes into the category of "unattended deaths."

2. The death occurs while the deceased was under the care of a physician or surgeon and the death does not come within the jurisdiction of the Coroner. Here, the death certificate is signed by the attending physician or surgeon (Section 3123, R.L.H. 1945) [whether or not he knows the cause of death. If he does not, he should state it to be "Unknown" on the certificate of death.].

3. The death occurs suddenly and does not come within the above two categories. This is an "unattended death" and is referred to the registrar for certification as to the cause of death. The law makes no provision for performing autopsies on these cases.

The above summary conforms with a recent opinion given by the City and County Attorney.

Comment

The above enumerated problems are but a few of the problems in our local community. The law is inflexible and leaves no leeway for intelligent decisions as to the necessity for autopsy. For example—an indvidual completely flattened by a steam roller must still have "a complete autopsy performed" (Section 10913, Revised Laws of Hawaii 1945). On the other hand, although someone may suspect violence or crime in connection with a death, an autopsy cannot be done legally in Hawaii unless there is *evidence*. In other communities the law makes provision for the performance of an autopsy on the basis of the opinion of the investigator. Example: A famous case in New York involves a man who was known to have chronic heart disease. He was seen running down the street and suddenly toppled over—dead. Obviously, the man had overexerted himself and his heart had quit. However, the Medical Examiner had a hunch and *in his opinion* an autopsy was indicated. At autopsy it was found that an ice pick had been plunged into the base of the skull

at the neckline above the hair line. The kinky hair of the scalp completely covered the wound and there had been practically no bleeding. The ice pick had severely lacerated a vital portion of the brain, indicating homicide. It is to be stressed that the autopsy was deemed necessary in the *opinion* of the Medical Examiner and was not mandatory by law.

It may be presumed that our present law was copied from the laws of some other community and that the necessity for radical change was never before recognized here. Other communities have been forced to recognize the inadequacy of the law (either by aroused public opinion, lawsuits or other factors) and have drastically changed their laws to conform with the more desirable Medical Examiner System or a Coroner System modeled along the same lines as the Medical Examiner System. Most of these changes are similar in each system, regardless of the name of the system, and are predicated upon the indications for, and the functions of, a medico-legal autopsy.

The Medico-legal Autopsy

A medico-legal autopsy should be regarded as indicated whenever the cause of a death or the circumstances in which it occurs are such as to indicate to any person that it may have resulted from the negligent or deliberate act of another, or from some unrecognized hazard to public health.

Every death known or suspected to have resulted from violent or unnatural causes should be investigated and certified to by a competent public official. Failure of the law to make such investigations mandatory or to provide a competent mechanism for their conduct inevitably leads to: (a) non-recognition of murder; (b) unsuccessful trials of persons who are guilty of murder; (c) suspicion and occasionally prosecution of innocent persons when a death has erroneously been presumed to be due to murder; (d) non-recognition of hazards to public health.

Fortunately, the law in Hawaii is mandatory with respect to deaths accompanied by evidence of violence. However, it does not do anything about hazards to public health or unattended deaths.

The unexpected or sudden death of any apparently healthy person from obscure causes may be suspected to have resulted from *violent* causes. From ten per cent to fifteen per cent of such cases are found after competent investigation. Many forms of violence such as suffocation, poisoning, small penetrating wounds, etc., leave no evidence of external damage and these may be recognized only during the course of an autopsy.

Criticisms and Suggestions

The law should provide the following, if there is to be any competent official medical investigation of deaths by violent or obscure causes:

1. Definition of deaths to be investigated.
2. Designation of responsibilities and qualifications of field investigators.
3. Availability of expert assistance and central laboratory facilities.
4. Authority to investigate.
5. Mechanism for bringing facts to the attention of appropriate law enforcement agencies.

In the course of establishing a more adequate law for our community, the following items from the *Report of the Committee of the American Medical Association to Study the Relationship of Medicine and Law* should be kept in mind:

1. The name of the office under which the medical investigator operates has little or no bearing on the effectiveness with which his public duties are discharged. The law should require first, that he is competent and second, that he have both the authority and the facilities for the conduct of his investigations in the interests of public welfare.

2. The investigating officer should be a physician.

3. The law of New Jersey is quoted and endorsed, with the added suggestion that it might be improved by the incorporation of a provision requiring medico-legal investigation of persons whose bodies are to be cremated. This law is as follows: (Title 40, Chapter 21, Paragraph 66) "Duties: The Chief Medical Examiner or an Assistant Medical Examiner shall be on call at all times for the performance of his duties.

When in the county, any person shall die as the result of violence, or by casualty or suicide, or suddenly when in apparent health, or when unattended by a physician, or within twenty-four hours after admission to a hospital or institution, or in prison, or in a suspicious or unusual manner, or under any of the above circumstances in any institution located in the county, maintained in whole or in part at the expense of the state or county, the police department of the municipality in which he died, or the superintendent or medical director of the institution in which he died, or the physician called in attendance, shall immediately notify the Office of the Chief Medical Examiner of the known facts concerning the time, place, manner and circumstances of the death. Immediately upon receipt of such notification the Chief Medical Examiner, or an Assistant Medical Examiner, shall fully investigate the essential facts concerning the death. If necessary he shall go to the dead body and take charge thereof.

The Examiner shall fully investigate the death, taking the names and addresses of as many witnesses thereof as it may be practicable to obtain, and before leaving the premises shall reduce all such facts to writing. He shall file his report in the Office of the Chief Medical Examiner."

The law of New Jersey further provides in Title 40, Chapter 21, Paragraph 68: "If the cause of the death shall, by examination, be established to the satisfaction of the Medical Examiner in charge, he shall file a report thereof in the Office of the Chief Medical Examiner. If, in the opinion of such Medical Examiner, an autopsy is

necessary, it shall be performed by the Chief or an Assistant Medical Examiner."

4. In discussing upon whose shoulders rests the source of authority for the performance of a medico-legal autopsy, the Committee states "... the person best qualified to give a medical opinion as to whether or not an autopsy should be performed is the medical investigator himself. So long as he is held responsible by the law to determine the cause of death, he should have the authority to perform or have performed an autopsy when in his opinion such a procedure is indicated by the facts at hand. However, the medical investigator should be required to hold an autopsy if such an examination is requested by the public prosecutor.

The Maryland law is partially satisfactory in this respect in that it stipulates that, 'If the cause of such death shall be established beyond a reasonable doubt, such Medical Examiner shall so report and file in his office. ... If, however, in the opinion of such Medical Examiner, an autopsy is necessary, the same shall be performed by the Chief Medical Examiner, an Assistant Medical Examiner, or by such competent pathologist as may be authorized by the Chief Medical Examiner.' The law would be improved if the second sentence was rephrased to read 'If, however, in the opinion of such Medical Examiner or in the opinion of the state's attorney, an autopsy is necessary....'"

5. The finances of having a medical versus a lay investigator are discussed, and this comment is made: "The fees for lay investigators are generally lower than the fees demanded by qualified medical investigators. Most of every dollar spent to pay an unqualified investigator is wasted so far as the acquisition of reliable medical information is concerned. Such a saving cannot be truly regarded as economical even though the primary cost is less than that of employing a physician."

6. The committee reports finally on their idea of model legislation as follows:

"The kind of laws to be enacted will vary according to whether the office is (1) to be kept strictly on a county basis without being integrated with a state laboratory service, (2) to be on a county basis but integrated with a state laboratory service and (3) to be a function of state rather than county government.

Regardless of the jurisdictional status of the office (state or county), the laws should provide:

1. That the official investigator (coroner or medical examiner) shall be responsible for determining the cause of death and such medical or other information from an examination of the body that may indicate the manner of death.
2. That it shall be the duty of a magistrate of a county or municipal court to hold an inquest if in the opinion of the official investigator or the county attorney such a procedure is indicated.
3. That it be stipulated that the official investigator shall be a qualified physician and that he shall be selected and retained in office under some form of the merit system rather than by political preference.
4. That the official investigator shall be notified when in his county (or jurisdiction) any person shall die of violence or suddenly while in apparent health or from obscure causes or when unattended by a physician or in any unusual or suspicious manner, or when in his county (or jurisdiction) the body of any dead person is to be cremated. Immediately on receipt of such notification the official investigator shall go to the place where the body lies and take charge of it. He shall then and there make a written description of the body and the premises, which report, together with an opinion regarding the cause and manner of death, he shall have copied and within seven days give one copy to the county attorney.
5. That, if in the opinion of the official investigator or the county or state attorney, it is in the interest of public welfare to perform an autopsy on the body of a person whose death occurs under the purview of the law, such an examination shall be performed or caused to be performed by the official investigator.
6. That an official autopsy may be performed by the official investigator if he is a qualified pathologist and, if not, the official investigator shall engage the services of a qualified pathologist for the performance of such an autopsy.
7. That the official investigator may, within the limits of the funds supplied his office by the county budget commissioner, engage the services of a toxicologist to assist in the investigation of the cause or circumstances of any death coming within his purview.
8. That there be created (for the benefit of communities not already supplied with such facilities) a state consulting laboratory having professional and technical facilities for assisting official investigators in the conduct of pathologic and toxicologic investigations on the bodies of persons whose deaths come under the purview of the law."

Conclusion and Recommendations

The preceding report is the result of many days of investigation of the local laws and various state and other laws, and includes the knowledge gained at a formal seminar held at Harvard University. There has been considerable time, effort and study devoted to the problem. It is my sincere hope that an effort will be made, not only to alter the present law, but to completely replace it by a law embodying the proposals of the American Medical Association Committee. The law of New York City is a good one and it is suggested that our local law be copied from it, with whatever modifications are necessary to meet our local needs.

The problem should be seriously considered by a responsible committee made up of at least the following individuals:

1. The City and County Physician.
2. The City and County Sheriff-Coroner.
3. The First Deputy Sheriff-Coroner.
4. The City and County Attorney.
5. The President of the Board of Health.
6. The Attorney General of the Territory.
7. The Medical Director of one of the principal hospitals.
8. The Chief of Police of Honolulu.
9. A representative from the Hawaii Territorial Medical Association.
10. The City and County Pathologist.

Any recommendations this Committee might propose should be properly presented to the legislative body concerned for appropriate legislative action.

Young Hotel Building.

Abbreviated for publication. The full text will appear in the author's reprints.

Familial Erythroblastic Anemia (Cooley's Anemia)

Report of Possible Cases in Two Filipino Brothers

E. F. SLATEN, M.D.

PAHALA, HAWAII

THIS DISEASE, variously known as erythroblastic anemia, Mediterranean anemia, thalassemia major, von Jaksch' anemia, and chronic erythremia of Cooley type, is generally considered a rare disease, found only among persons of Mediterranean extraction, particularly Greeks and Italians. The United States has furnished most of the case reports, and the patients described have been of Italian, Greek, Syrian or Armenian ancestry. The literature lists two children of probable German origin, one Spanish child, one Chinese child, five children in India, two Egyptian children, and two patients from the Caspian Sea area, a 14-year-old girl and her brother, 30, described as Bucharan Jews. Commonly, several siblings in a family are affected, and the condition has been observed in identical twins. Often both parents show some significant abnormality of the blood.

Clinical Aspects

The onset of the disease is insidious. Pallor is usually noticed in the first two years of life. Not long after, the abdomen becomes prominent because of splenomegaly and, often, enlargement of the liver. There may be periodic attacks of fever. When the condition is fully developed, the clinical picture is: A child small for his age, with a large head; skin of a pale, muddy color; prominent cheek bones; bridge of the nose sunken; eyelids puffy, and there may be an epicanthal fold from which derives the designation "Mongoloid facies." Clinical jaundice is unusual. A moderate lymphadenopathy may or may not be present. The heart is often enlarged in advanced stages, and there may be edema and effusion into serous cavities. X-ray of the bones shows peculiar changes. There may be thickening of the diploë of the skull to several times the normal depth. The outer and inner tables are thin, the former sometimes being invisible, and perpendicular striations may be apparent between the tables, giving the so-called "hair-on-end" appearance. The long bones show widening of the medullary portion, decreased density of the medulla, and thinning of the cortex. The short bones, often rectangular in contour, show a characteristic mosaic pattern because of trabeculation of the medulla. These bone changes vary with the severity of the disease and advance with time. They may be present even as early as four and one-half months of age. The earliest lesions in the skull appear in the frontal bones. *It should be emphasized that the changes in the skull vary considerably even in cases of apparently equal severity, and more consistent changes have been observed in the long bones and in the metacarpals.*

The red cell count varies between one and four million, usually being between two and three million per cubic mm. The reduction in hemoglobin and in volume of packed red cells is even greater, so that the anemia is hypochromic and microcytic in type. The red cells vary from 3 to 15 micra in diameter. They contain little hemoglobin, mostly distributed at the periphery. Often cells are found with a central block of hemoglobin surrounded by a clear area (target cells). In wet preparations, the distortion of the red cells is still more apparent and there may be considerable fragmentation. Nucleated red cells are almost constantly found and sometimes are very numerous. Mostly they are typical normoblasts and microblasts, and very seldom more immature normoblasts are seen. In addition to these findings of active red-cell regeneration, many polychromatophilic cells, stippled erythrocytes, and occasional cells with Howell-Jolly bodies are found. Reticulocytes are increased, often up to 15 per cent. As tested by hypotonic saline solution, the fragility of the red cells is often decreased. Hemolysis may not be complete in 0.2 per cent saline, and sometimes even in water it may not be complete. The leucocyte count is usually between 10,000 and 25,000 per cubic mm., but in rare instances may reach 50,000 or even 100,000. On smears are usually found polymorphonuclears, few myelocytes, lymphocytes, and monocytes. Sometimes in infants there is a lymphocytosis. Platelet count is normal. There is a positive indirect Van den Bergh reaction, and an icterus index not higher than 30. The urine often contains slightly or moderately increased quantities of urobilinogen or urobilin. The feces and the bladder bile have been found to contain greatly increased amounts of coproporphyrin.

Diagnosis

Diagnosis is based on the following findings: anemia, splenomegaly, and skeletal changes. The blood shows thin, pale red cells of various shape and size; erythroblastosis, polychromatophilia, stippling, reticulocytosis, leucocytosis, slight icterus, and resistance to hemolysis by hypotonic saline solution. This combination of findings distinguishes the condition from congenital hemolytic jaundice and from sickle-cell anemia. The course in Cooley's anemia is progressive. In its classical form it is fatal, and usually it is rapid when it begins in early life. The prognosis improves with advancing age. In the more chronic cases the clinical picture is less impressive and the diagnosis may not be made.

Treatment

To date there is no treatment. Iron and liver are of no value. Transfusions are at best of temporary value. Splenectomy is generally discountenanced. Following removal of the spleen, erythroblastosis becomes more marked.

Pathology

In cases of Cooley's anemia, the main findings at autopsy are evidences of anemia and of active blood formation, both medullary and extramedullary; splenomegaly; changes in the bones; and pigmentation of various organs resembling that of hemochromatosis. The spleen is much enlarged and may show infarcts and adhesions. There are hyperplasia of the cordons and extramedullary blood formation. The Malpighian corpuscles are approximately normal or small. The bones may be greatly thickened, but there is atrophy of the bone shafts and trabeculae, and at the same time proliferation of delicate new bone. The bone marrow is hyperplastic. There may be a number of phagocytes, some containing a small amount of hemosiderin.

Pathogenesis

It is believed that this disorder represents a hereditary defect in red-cell formation, consisting, perhaps, of an inherited inability to synthesize an adequate amount of hemoglobin, and to utilize iron. The red cells are formed with an adequate or excessive membrane, but with little substance. As a result, they can absorb more fluid than normal cells without bursting. The extra thinness of the cells accounts for some of the bizarre forms which are observed, including the target cells. Other manifestations may simply represent an attempt to compensate for the faulty red-cell formation. This view would explain the marrow hyperplasia and the immature forms of the red series found in the peripheral blood. It is plausible to assume that marrow hyperplasia from early life can cause such bone changes as are found in children suffering from this disorder.

(The foregoing amounts to an abstract of Wintrobe's discussion of Thalassemia Major.)

Fig. 1. Roentgenogram of right hand of L. C., showing mosaic pattern of bone marrow.

Case Reports

L. C., a two-year-old Filipino boy, entered the Hawaiian Agricultural Company Hospital with violent abdominal cramps and vomiting. The onset had been sudden on the day of admission and about three hours after eating raw, unrefrigerated fish. The bowels had moved that morning and the parents had noticed no diarrhea and no blood in the stool. The temperature was 102.4 F. rectally. The mucous membranes were pale. There was a left subcostal scar and mother said that the spleen had been removed when the child was one year old. The liver was palpable one fingerbreath below the right costal margin. There was no lymphadenopathy. Rectal examination revealed no blood.

There being no clear-cut evidence of intestinal obstruction, the patient was treated symptomatically. The following morning all gastro-intestinal symptoms had subsided and they did not recur.

The child's weight was 23 pounds, height 32¼ inches, head circumference 19 inches, chest 20½ inches, abdomen 21 inches. His blood count was so striking that it prompted further blood studies.

Questioning of the mother revealed that the patient's four-year-old brother, R. C., had had a large spleen from early life which had been removed when he was two years old. He was brought to the hospital subsequently and there were the same blood and skeletal find-

ings, although in his case more pronounced. His measurements were as follows: Weight 33½ pounds, height 37½ inches, head circumference 20 inches, chest 21½ inches, abdomen 22½ inches. Being Filipino, both boys had Mongoloid facies.

The mother knew of no other relatives who had enlarged spleens or blood disorders. She stated that she was 26 years of age, was pure Visayan, born in Papaikou, Hawaii, and her husband, 36 years of age, was pure Ilocano, born in Dingras, Ilocos Norte, P. I. Some time later, after discussion with other members of the family, she decided that both she and her husband had some Spanish blood. It might be noted that in appearance both parents were typical Filipinos as we see them in the Hawaiian Islands. The mother showed no abnormalities of the hemogram. The father was not examined.

The following are the laboratory findings of the two brothers:

L. C.

11/22/46 RBC 2,400,000, hemoglobin 40% (Hellige), WBC 10,300 (neutrophils 65%, lymphocytes 21, eosinophils 4, juveniles 2, bands 8)
Color index 0.83
Blood platelets 196,000
Reticulocytes 6.5%
Packed cells 14
Clot retraction normal
Nucleated red cells 203 per 100 WBC
Fragility of RBC—no hemolysis at end of 2 hours
Blood Wassermann and Kahn negative

3/4/47 RBC 3,050,000, hemoglobin 46% (Hellige)
Platelets 230,000
Fragility of red cells (washed cells)—no hemolysis at end of 2 hours
Cold agglutinins negative, autoagglutinins negative
Red cells show no sickling
Moderate anisocytosis and poikilocytosis
Many target cells
Blood cholesterol 130 (normal values 140-180)
Icterus index 6; acetone method 7.5 (normal values 2-5)
Van den Bergh reaction indirect, quantitative Van den Bergh less than 0.25 mg. per cent
Urine negative for RBC and hemoglobin
Urobilinogen definitely positive

R. C.

12/12/46 RBC 1,860,000, hemoglobin 30% (Hellige)
WBC 12,600 (neutrophils 34, lymphocytes 27, eosinophils 33, monocytes 2, basophils 4, bands 4)
Color index 0.79
Blood platelets 176,000
Reticulocytes 7%
Packed cells 11
Clot retraction normal
Nucleated red cells 370 per 100 WBC
Fragility of red cells—no hemolysis at end of 2 hours
Icterus index 10, acetone method 15
Blood Wassermann and Kahn negative

3/4/47 RBC 2,620,000, hemoglobin 35% (Hellige)
Platelets 270,000
Fragility of red cells—no hemolysis at end of 2 hours (washed cells)
Cold agglutinins negative, autoagglutinins negative
Red cells show no sickling
Blood cholesterol 131
Van den Bergh reaction indirect, quantitative Van den Bergh less than 0.25 mg. per cent
Urine negative for RBC and hemoglobin
Urobilinogen definitely positive

L. C. X-ray of the skull was essentially negative, except for questionable thickening of the frontal bones and a suggestion of striation in the occipital bone. Femora showed moderate rarefaction of the distal ends. Forearms and hands showed rarefaction of the shafts of the radius and ulna and all the bones of the hands showed osteoporosis and trabeculation, mosaic in design. The metacarpals had a rectangular appearance.

Blood smears and sections of the spleens of both children were submitted to Dr. Michele Gerundo, pathologist for the Hilo Memorial Hospital, whose report is as follows:

Study of the blood smears reveals marked anisocytosis, poikilocytosis, and increased pallor of the cells. Many large cells are found, in which the hemoglobin is arranged peripherally, leaving a central clear area. These cells give the impression of being edematous. These cells show an uneven distribution of hemoglobin, which is arranged in blocks, or present a central dot of hemoglobin surrounded by a clear area (target cells). There is a large number of normoblasts, some of them having hemoglobin and a pyknotic nucleus, others showing marked polychromatophilia. So far as one can see, there are no erythroblasts or cells more immature than polychromatophilic normoblasts. Some cells contain small residual bodies, which suggest Jolly's bodies. There is no tendency toward sickling of the cells, although this finding needs to be corroborated by actual test for sickling.

Among the white cells there is a moderate number of myelocytes and metamyelocytes, but no other immature cells. The platelets do not seem to be increased in number, although a count would be indicated before final judgment is passed.

The findings on the blood smears are compatible with the clinical diagnosis of chronic erythremia, Cooley's type, called also erythroblastic anemia of von-Jaksch-Luzet-Cooley type [and familial erythroblastic anemia. —Ed.].

Note: Only one report is given for the two brothers, as the findings are similar in both. It must be noted that, at least on the smears which have been given to me for examination, R. C. shows more normoblasts and more myelocytes and metamyelocytes than L. C., as well as more evident poikilocytosis and anisocytosis.

MICROSCOPIC DESCRIPTION OF SPLEEN TISSUE (L. C.)

Spleen shows a rather normal architecture and structure. The corpuscles of Malpighi are scattered at rather irregular intervals and practically all contain large germinal centers. The pulp is hyperplastic; it shows no increase of the fibrous framework and contains very little blood in the sinuses and veins. Under high power the cells are of splenic origin, except in areas where there are active hematopoietic foci. The red cells in these areas tend to be elongated or to vary in shape and size. Very conspicuous are the numerous eosinophils found in these areas as well as among the splenic cells and along the trabeculae. Large amount of hematic pigment is present, free as well as engulfed in the splenic cells.

Anatomical Diagnosis: Spleen: Hyperplasia with Extramedullary Hematopoietic Foci.

MICROSCOPIC DESCRIPTION OF SPLEEN TISSUE (R. C.)

Spleen resembles the other, except that there are few Malpighian corpuscles present, and the fibrous framework is increased with corresponding diminution of cellular elements. The hematopoietic foci are also reduced in number and the eosinophils are not found in any outstanding number.

Discussion

I believe that most of the criteria for the diagnosis of Cooley's anemia are present. The skull changes are not so marked as in many descriptions in the literature. Yet, if one waited for every single classical criterion in any syndrome to be manifest one would make few definitive diagnoses. No doubt the insistence on the prerequisite of Mediterranean extraction in patients with this

disease has prevented its recognition in other racial groups. So far as we know, there have been no reports of Cooley's anemia among Filipinos, whether of pure or mixed origin. Therefore, these two cases add to the statistical incidence of this disease. It is absurd in science to ask that any one disease must be considered as occurring in only one racial group. Cooley's anemia will probably follow the same course as many other so-called racial diseases. As study progresses, it will be found that it is perhaps widespread without any respect or consideration for any special ethnic group.

Conclusion

Despite the questionable skull findings, I still believe the other clinical and laboratory findings are sufficient to establish the diagnosis of familial erythroblastic anemia (Cooley).

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Discussion

DR. M. GERUNDO:—Of all the names given to this disease the most absurd is certainly "thalassemia." Its components *thalassa,* sea, and *emia,* blood, would imply that these patients have perhaps sea water in their blood. Now if we look at the matter closely, our body fluids, and that includes blood, have the same composition as sea water; and I wonder whether anyone could survive without sea salts in the blood.

The name of Mediterranean anemia is also undesirable. The term "Mediterranean" may refer to the locality or to a race. In the first instance, there is no evidence that the climate or other particular factors present along the shores of the Mediterranean Sea may have any influence upon the development of the disease. Indeed, studies on this disease were made on patients who had lived all their life in this country. Similar terms, like Malta fever and Rocky Mountain spotted fever, are now rejected by the majority of authors. In the second instance, there is no such thing as a Mediterranean race. To be sure there are peoples and nations in the area, but not a race to be identified with the sea. It is enough to glance at some history books to find out how many different stocks of people are present there. In science, we cannot adopt the racial factor—if really there are races in the human race—as the most important criterion for a disease. As pointed out in Downey's *Handbook of Hematology,* patients who had all the characteristics of this so-called "Mediterranean Anemia" were not included in the group, because they were of a different racial extraction. It seems to me that the clause of racial limitation is carried to an excessive degree.

The third term, "erythroblastic anemia," is unsuitable because it takes into account only a secondary peripheral finding and ignores the pathogenesis of the disease. The Italian hematologist Di Guglielmo has pointed out that no one would call a lymphoid or myeloid leukemia "lymphoblastosis" or "myeloblastosis." He has classified Cooley's anemia in the group of chronic erythremia or chronic erythremic myelosis. This term is the most appropriate because it takes into account the central lesion, it follows the classical hematological terminology and it is consonant with the efforts of modern hematology to recognize disease of the hematopoietic organs and not of the peripheral blood.

The two patients presented by the author have all the features of chronic erythremia (Cooley's type) as you see from the slides of blood and bones. The Mongoloid face is not a necessary sign. It has been pointed out that many Mexican children in good health have facies suggestive of the changes of this disease because of their broad features. On the other hand, a person with an elongated type of framework, as it often occurs in Nordic countries, requires extensive bone changes to reproduce the Mongoloid facies.

Incidence of Oxyuriasis Among A Group of School Children in Honolulu

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HONOLULU

OXYURIASIS, i.e., infection with pinworms, Enterobius vermicularis (Fig. 1), appears to be one of the most common parasitic diseases of man. A report of extensive surveys conducted by the National Institute of Health in the District of Columbia indicated that 35.4 per cent of the general population of that area harbored these parasites.[1] The report also pointed out that data from four European countries (Germany, Finland, Sweden and Soviet Russia) show an average of 46 per cent infection among several thousand individuals examined, the positive findings ranging from 3 to 93 per cent. Pinworm infection appears to surmount all sanitary barriers, being found in all classes of people irrespective of their economic levels. According to the findings of the National Institute of Health, oxyuriasis is more prevalent among children of school age (6 to 18 years) than adults. This is probably the result of improper sanitary habits and close associations at school and play permitting greater risk of infection.

This paper presents the results of a brief survey made to determine the incidence of pinworm infection among a group of young children attending one of the schools in Honolulu. This study was initiated because the attention of the writers was drawn to several cases of oxyuriasis among local children and because there appeared to be a need for determining the incidence of the infection in this community. As far as is known to the writers, no similar study had previously been conducted in Hawaii.

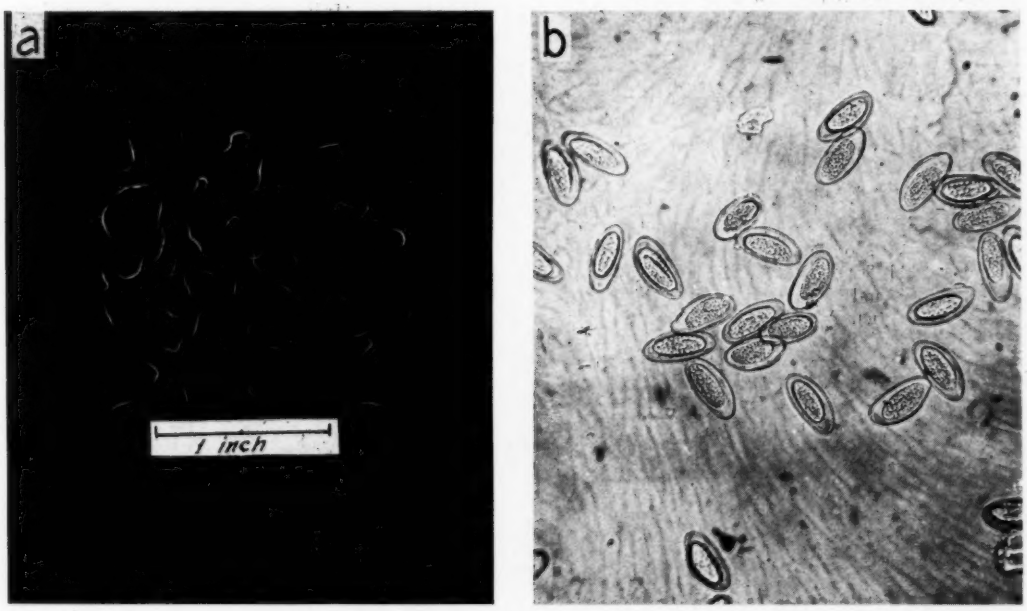

Fig. 1. Pinworms, Enterobius vermicularis: (a) Adult males and females; (b) Eggs.

In testing the children for pinworms the "NIH swab" (Fig. 2) was used; this apparatus was originally described by Hall[2] and has been found very

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useful for collecting pinworm eggs from the perianal region. The method adopted in securing the material for examination consisted of submitting to the parents, through the school authorities, one "NIH swab" with a note describing the method and time of making the swab. The note suggested that the perianal region of the child be swabbed the first thing in the morning upon arising, and that the specimen be submitted to the laboratory for examination. In making the examination all the children found positive on the first swab were not re-examined, but those found negative were tested a second time.

The children examined in this study totaled 138 and ranged from 2½ to 7 years of age. Of these, 71 were of Caucasian and 67 of Oriental ancestry. There were 65 boys and 73 girls.

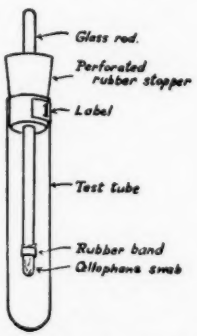

Fig. 2. The NIH swab (after Hall, 1937).

Results and Discussion

Of the 138 children examined 43, or 31.1 per cent, showed pinworms. Since only one additional examination was made on the children found negative after the first swab, there is a possibility that a few that harbored pinworms were missed. According to Sawitz,[3] one examination is estimated to reveal about 70 per cent of the positives and 2 examinations about 80 per cent of the positives. His report indicated that 7 examinations are necessary to insure finding most (96 per cent) of the positive cases. Accordingly therefore, the corrected percentage of positives in the present study would theoretically be about 38 per cent.

In this survey the incidence of infection among the 2 sexes was about equal. Of the 43 positive cases, 22 were boys and 21 girls. This equal distribution of infection was similarly indicated by the National Institute of Health survey (Cram *et al*[1]) in the District of Columbia in which, of the 627 persons examined, 36.3 per cent of the positives were males and 34.2 per cent were females.

As to the incidence of infection with reference to age, the number of children examined for each age group is too small to permit definite correlations; however, the percentage differences found are indicated in Table 1. In this regard, Cram and co-workers in the District of Columbia found 36 per cent of children up to 18 years of age, as compared with 33 per cent of adults, positive for pinworms. Of the children, those of school age (6 to 18) showed higher incidence of infection (50 per cent) than those of the pre-school age (20 per cent). It was suggested by those investigators that the school environment was probably responsible for the increased incidence of infection in the children of school age.

It is of interest to note, in the present study, the apparent greater percentage of pinworm infection among children of Caucasian ancestry than among those of Oriental ancestry. Of the 71 Caucasians examined, 29, or 40 per cent, were found positive, and of 67 Orientals examined, 14, or 21 per cent, were positive. Whether or not similar results would be obtained if a larger sample of the population were examined remains to be determined.

Although the present study involved too few children to allow inferences regarding the entire child population of Honolulu, the sample is large enough to indicate that oxyuriasis appears to be common in the area and to constitute a problem of public health interest. Much could probably be done towards its control through education and proper treatment.

TABLE 1.—*Age distribution of 138 children examined for pinworms, and incidence of infection among each age group.*

Age	2	3	4	5	6	7
Number examined	10	17	32	35	37	7
Number positive	4	3	9	7	16	4
Percentage positive	40.0	17.6	28.1	20.0	43.2	57.1

Summary

An examination of a group of 138 children, aged 2½ to 7, attending school (nursery to first grade) in Honolulu, showed 31.1 per cent to be positive for pinworms on two swab examinations. Calculated on the basis of seven swabs, believed required to reveal most cases, the incidence of infection would probably be about 38 per cent. The number of positive cases was found to be equal among the two sexes. Children of Caucasian ancestry appeared to show a higher incidence of infection (40 per cent) than those of Oriental ancestry (21 per cent). The results indicate that oxyuriasis is probably common in this community and represents one of the problems of public health importance.

The University of Hawaii.

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Why A Lumbar Puncture?

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HONOLULU, T. H.

THERE IS probably no diagnostic procedure in the field of medicine which is more severely abused, misused and improperly applied than the lumbar puncture. One gets the impression that the average medical man derives a certain amount of sadistic satisfaction out of obtaining a four inch long needle and pushing it up to the hilt in the patient's back. He then gleefully collects a tube full of clear or bloody, more frequently the latter, fluid, without considering the specific indications and contraindications for the procedure, or the amount of valuable diagnostic information he can obtain.

For the past several years, almost every patient I have been called to see for neurological consultation has already had one or more lumbar punctures. When the referring physician is asked why the lumbar puncture was done the answer is almost always, "to find out what is wrong with the patient." It seems as though he almost expects the menehunes to jump through the needle and shout in a loud voice the neurological diagnosis. When the laboratory report is returned and the diagnosis is not found on the laboratory sheet, the disappointment and bewilderment of the doctor is evidenced by a repetition of the procedure, one, two, or even three times.

It is the purpose of this communication to point out, emphasize and re-emphasize the fact that diagnosis of [most] diseases of the nervous system cannot be made with the lumbar puncture needle. In this age of modern medicine, with dozens of diagnostic laboratory procedures to make our clinical diagnosis for us, the modern physician drifts further and further from good old fashioned physical diagnosis. An accurate diagnosis of a disease of the central nervous system can only be made by a careful, intelligent neurological examination and interpretation and the evaluation of symptoms indicating dysfunction of certain parts of the nervous system. No laboratory procedure can replace this.

There are a few neurological diseases in which the laboratory findings of the spinal fluid *may help* to verify the clinical diagnosis. But these findings in themselves are not diagnostic. Actually, there are only *three* pathological conditions of the central nervous system which can be diagnosed by lumbar puncture alone. They are: 1. Central nervous system syphilis; 2. Spinal meningitis; 3. Subarachnoid hemorrhage. Each of these diseases can readily be recognized by their clinical signs, with, perhaps, the exception of certain milder forms of central nervous system syphilis [asymptomatic neurosyphilis—ED.]. So actually, if a physician is honest with himself, he will never do a lumbar puncture except as an adjunct to one of these three diseases which has already been strongly suspected clinically.

1. On all patients with positive blood Wasserman or a clinical picture suggesting central nervous system syphilis, the spinal fluid findings will either verify or rule out luetic infection of the central nervous system.

2. The clinical picture of acute meningitis is easily recognized. The patient is acutely ill with high fever, rapid pulse, stiff neck, and high white blood count; he may be in coma. In such cases, purulent spinal fluid obtained by lumbar puncture will verify not only the diagnosis but the bacterial etiology of the infection.

3. Subarachnoid hemorrhage, either spontaneous or traumatic, can be recognized clinically by low grade fever, stiff neck, severe headache, and particularly a slow pulse. In the presence of these clinical findings, bloody spinal fluid can be expected and lumbar puncture is indicated not only for diagnosis but for treatment in relieving the patient's headaches by removing a small quantity of the bloody fluid.

In all other diseases of the nervous system, the spinal fluid findings are not only not diagnostic in themselves, but may be actually misleading. For example, patients with a clinical picture of severe encephalitis may have perfectly normal spinal fluid because the infection is deep in the white matter of the brain and nowhere near the meninges to produce irritation and an increase in the spinal fluid cell count. A high total protein content of the spinal fluid may suggest the presence of a tumor obstructing the spinal canal; however, large tumors may be present in the spinal canal without completely obstructing it and a normal spinal fluid protein content may be misleading.

There are specific indications and contraindications for doing a lumbar puncture, as a diagnostic procedure. There are really more contraindica-

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tions for a lumbar puncture than indications. These should all be carefully considered by the physician before a lumbar puncture is contemplated.

Indications for Lumbar Puncture

1. On all patients with positive blood Wassermann or if the clinical picture suggests a central nervous system syphilis.
2. Acute infections of the central nervous system, where the clinical picture suggests a myelitis (polio), meningitis, or encephalitis.
3. Suspected spinal cord tumors or injuries to the spinal cord (to determine subarachnoid hemorrhage or spinal fluid block) and herniated intervertebral discs where a high spinal fluid protein may be helpful in the diagnosis.
4. On all epileptics, primarily for the Wassermann reaction.
5. Head injuries. *The only indication* for a lumbar puncture following a head injury is evidence of a subarachnoid hemorrhage or meningitis characterized by: 1) Headache or stupor; 2) Rising or continued elevation of temperature; 3) Persistent slow pulse; 4) Stiff neck.

Contraindications to Lumbar Puncture

1. Always the first and most important, *never* do a lumbar puncture without first examining the eye grounds for evidence of intracranial pressure. Even if the optic nerves are only blurred and the vessels tortuous, a lumbar puncture is contraindicated. Other clinical evidences of intracranial pressure likewise are contraindications, such as stuporousness, coma, slow pulse, frequent yawning, etc. If the patient has increased intracranial pressure and one punches a hole through the dura of the caudal sac, there is a rapid loss of spinal fluid through this hole into the surrounding tissues of the spine and over a period of a few minutes to a few hours, considerable spinal fluid may be lost resulting in a negative pressure in the spinal canal. The positive pressure in the cranial vault gradually forces the tonsils of the cerebellum through the foramen magnum, compressing the medulla oblongata and the patient will die of respiratory paralysis from medullary compression.
2. Never do a lumbar puncture in an attempt to relieve intracranial pressure.
3. Never do a lumbar puncture in a head injury within the first twenty-four to forty-eight hours.
4. Never do a lumbar puncture in skull fractures with bleeding from the ears or nose. Removal of the fluid from below will cause negative intracranial pressure which may aspirate infected material through the fracture line into the intracranial cavity and meningitis will result.
5. Never do a lumbar puncture on a patient who has had a cerebral vascular accident within the first forty-eight hours. A relief of intracranial pressure by removal of fluid may increase the hemorrhage or start one which had already stopped.
6. Never do a lumbar puncture in your office. Do not consider the procedure as a minor, insignificant one. Because of the serious complications which can result, the patient should be in the hospital where he may be kept flat in bed and watched for twelve hours after the procedure.

Post Spinal Puncture Headaches

When I am informed by my colleagues that the severe throbbing headache which occasionally follows a lumbar puncture is psychogenic I am convinced they know nothing of the hydrodynamics of the cerebrospinal fluid. I have been told by sincere and conscientious doctors that if the patient is told to get up immediately after a lumbar puncture and go to a show or a dance or some other entertainment and forget about it, there will be 60 per cent less patients with post puncture headaches than among those kept in bed after the procedure. This may be a good sales talk to anyone but a neurosurgeon!

In operating upon lumbar intervertebral discs I have had an opportunity to expose the dural sac over 400 times. If the dura is accidentally nicked or if a needle is intentionally inserted through it (to remove pantopaque oil) a continual stream of spinal fluid will pour from the small perforation and flood the operative field for the remainder of the operation. Of course, the larger the needle used and the shorter its bevel (blunt end), the larger the hole it makes in the dura and the greater the loss of fluid. The smaller the needle and sharper the point, the less fluid lost.

It is surprising to see the quantity of fluid which escapes when even the finest needle is used. It is a wonder to me there aren't more post-puncture headaches.

The normal intrathecal presure of the cerebrospinal fluid in the horizontal position is a positive pressure of 150 to 180 mm. of water. A lot of fluid can be pushed through the hole you make in the dura with your spinal needle with this amount of pressure behind it, even with the patient lying down. If you weren't lucky enough to "get in" the first time, you may have poked 3 or 4 more holes through which fluid could leak. Now, if you let your patient stand up, go home on a bus, or go to a show (!!), in the upright position, the intrathecal pressure in the lower lumbar sac is between 500 and 600 mm. of water. How much

fluid do you think is going to escape into the tissues of his back? Then when he comes back with a headache, and a backache, it's psychogenic!!?

No! the post puncture headache is due to loss of large quantities of cerebrospinal fluid, escaping through the needle hole in the dural sac, resulting in an increased negative intracranial presure with the head in the upright position. The headache is immediately relieved by changing the negative to a positive pressure—by placing the patient in the horizontal position or with his head down.

The headache can be prevented by these simple rules:

1) Use a small needle (#20 or less) with a long bevel (sharp point).
2) Before removing the needle withdraw it about 1 cm. or until the fluid flow stops, indicating the needle to be outside the dural sac; inject 1 cc of air through the needle; then withdraw. This bubble of extradural air equalizes the intradural pressure and may stop the flow of fluid.
3) Keep the patient horizontal or head down for twelve hours: it takes at least this long for nature to patch the hole in the dura.

In the past ten years, I have probably done over 2,000 lumbar punctures in my neurological practice. Following the above rules, I can only recall three patients who developed post puncture headache of any significance requiring prolonged bed rest.

Spinal Fluid Pressure and Its Interpretation

When a diagnostic lumbar puncture is indicated one should seek to obtain as much diagnostic information from it as possible. One of the most important findings to record is the spinal fluid pressure. So frequently, I will find the laboratory report of a spinal fluid specimen and find no notes in the doctor's handwriting as to his findings: intracranial pressure, hydrodynamics and color of the fluid, etc. When I ask if he measured the pressure, he answers, "No, I didn't have a manometer," or "I couldn't find a manometer," or "I didn't need to measure it, the fluid dropped out under 'normal' pressure"!!!—then I know he either doesn't know what he is doing or why he is doing it, or he is a sadist.

One should never even start a lumbar puncture unless there is a sterile water manometer available. If you do, you are going to miss one of your most valuable diagnostic findings. It is impossible within a range of 100 mm. of water to guess the spinal fluid pressure by the rate at which the fluid drops from the needle.

The normal initial pressure with the patient in a horizontal position is 150 to 180 mm. of water. In the sitting position the fluid will rise in the manometer to the cisterna magna, i.e., at a level with the top of the ears; above this the pressure is considered to be increased. Any spinal fluid pressure above 200 mm. of water (horizontal) or above the top of the patient's head (upright) should be considered as pathological—any increased intraspinal fluid pressure should be viewed with alarm and should demand immediate action. This increase in pressure indicates the presence of a space taking lesion in the closed cavity of the cranium. Whether it be a tumor, an abscess, a hematoma or edema, the *impairment* of the cerebral function by the pressure may proceed rapidly to *cessation* of function if the pressure is not relieved.

A child was recently seen at 8:30 a.m. in consultation, twenty-four hours following a head injury. During this time, she had become increasingly more listless. The pulse was slow. At 10 a.m. a lumbar puncture was done and an initial pressure of 350 mm. of water found. This finding was either ignored or its significance not appreciated, because no report of it was made and nothing was done. The child died at 1:00 p.m. Autopsy disclosed a large extradural hematoma beneath a linear fracture. The proper evaluation of this one spinal fluid finding with immediate surgical intervention and removal of the hematoma would have saved the child's life.

Summary and Conclusions

And so the next time you contemplate doing a diagnostic lumbar puncture, hesitate a few minutes and ask yourself the following questions:

1. Why am I doing this?
2. What do I expect to learn?
3. Am I trying to *find* a diagnosis or verify one?
4. Will the procedure do the patient more harm than good?
5. Are there any contraindications to the procedure in this case?

If you carefully consider and answer each of these questions before you get the spinal needle in your hand, I am sure there will be a great many less lumbar punctures done. After the proper lumbar puncture procedures have been performed including measurements of initial pressure, hydrodynamics by the Queckenstedt test, and an inspection of the fluid obtained for laboratory study, the doctor should then write down, evaluate and ponder over *his* findings (not those of the laboratory). If they show gross deviation from normal and he is unable to evaluate the pathological significance, he should not hesitate to immediately call in some one who can.

388 Young Hotel Building.

Effect of Penicillin Sodium on Coliform Bacilli and Proteus in Vitro

STANLEY S. YONAMINE, B.A., M.T., AND FLOYD W. HARTMANN, Sc.D.
HONOLULU, HAWAII

THIS STUDY was undertaken with two purposes in mind: to observe the effect of penicillin sodium on the morphology of Escherichia coli, Aerobacter aerogenes and Proteus vulgaris, and to find out whether the drug would induce physiological changes in these organisms which would be reflected in certain identifying tests commonly employed in clinical laboratories. Further investigation of morphological changes was suggested by the observations of Alture-Werber et al.[1] and Kojima and Heimbrock[2] on the effect of penicillin against E. coli and by Fennel's[3] work with A. aerogenes. Prot. vulgaris was included as a test organism since it is commonly encountered in association with organisms of the coliform group in routine laboratory examinations of feces, urine, and other body fluids.

Any physiological effects of the drug which would alter the well known cultural reactions of these organisms would have more than theoretical interest. On several occasions Gram-negative rods resembling coliform bacilli have been isolated from feces and urine cultures at one of the hospital laboratories* in Honolulu but when tested have failed to give the characteristic reactions of E. coli, A. aerogenes, Prot. vulgaris, or any other commonly occurring organism. Since all of the patients were receiving penicillin treatment it was thought that these atypical reactions might be due to the effect of penicillin. Some study of this possibility seemed desirable.

Methods

Stock laboratory strains of organisms which exhibited typical morphology, Gram reaction and cultural characteristics were chosen for the study. In the case of E. coli and A. aerogenes, the "Imvic" tests (indole production, methyl red test, Voges-Proskauer reaction, and citrate utilization) were made. In addition the growth of E. coli on eosin methylene blue agar was noted. In all respects the results were characteristic for each organism. With Prot. vulgaris preliminary observations included indole production, V.-P. reaction, citrate utilization, and gelatin liquefaction as well as growth on E.M.B. medium, blood agar, and Kligler's iron agar. Typical results were obtained in each case. The test strains of E. coli and Prot. vulgaris were actively motile.

Prior to exposure to penicillin the test organisms were transferred from stock cultures into 5 ml. of brain broth and incubated for 24 hours, then transferred again into 5 ml. of brain broth to make certain that the organisms were in an optimal metabolic condition. All incubation was carried out at 37.5± 0.5 °C. The second subcultures in brain broth were incubated for 12 hours in the case of E. coli and A. aerogenes and for 6 hours in the case of Proteus, and from them a standard (4 mm.) loopful was diluted and plated to ascertain the size of the inoculum to be employed. Plate estimates made after 24 hours gave the following results: E. coli approximately 5,500,000 organisms per loop; A. aerogenes, 7,000,000; and Prot. vulgaris, 4,000,000. At the same time one loopful was transferred from the 12-hour or 6-hour cultures into various dilutions of penicillin. To avoid dilution of nutrient material or any alteration in pH value of the final test media 100,000 Oxford units were dissolved in 20 ml. of brain broth, the same medium used for all test cultures containing penicillin. This stock solution was then diluted with brain broth to achieve final concentrations ranging from 12.5 to 4,200 units per ml.

Smears from each tube of test medium were made after 3, 4, 6, 12, 24, and 48 hours in the incubator, stained by Gram's method, and examined.

After 12 and 24 hours' growth in the presence of penicillin subcultures were made into suitable media to see whether the cultural characteristics previously noted had been altered.

Results

In Table 1 it will be noted that penicillin induced marked morphological changes in the

From the Department of Bacteriology, University of Hawaii. The authors wish to thank Dr. M. L. Tainter of the Winthrop Chemical Company for the penicillin sodium used in this work.
Received for publication April 18, 1947.

[1] Alture-Werber, E., Lipschitz, R., Kashdan, F., and Rosenblatt, P.: The Effect of Incompletely Inhibitory Concentrations of Penicillin on Escherichia Coli, J. Bact. 50: 291 (Sept.) 1945.

[2] Kojima, I. and Heimbrock, M. J.: Observations on Budding Fungus-like Form of E. Coli in the Urine of a Patient Receiving Penicillin, HAWAII MED. JOUR. 5: 257 (May-June) 1946.

[3] Fennel, E.: Penicillin: Its Effect on Bacterial Morphology, HAWAII MED. JOUR. 5: 259 (May-June) 1946.

* St. Francis Hospital.

organisms. The three principal deviations were: the formation of long filaments at low concentrations of penicillin and at early growth stages, especially in the case of Proteus; frequent appearance of swellings on the rods and filaments; and segmentation with development of coccal forms at higher concentrations of penicillin (not shown in table). The formation of swellings appeared to be a very transitory process, being limited to relatively narrow ranges of drug concentration and the earlier growth stages. All of the morphological changes noted were temporary and the organisms reverted to their characteristic short rod forms by the end of 48 hours exposure to penicillin.

The different susceptibilities of the test organisms to growth inhibition were very striking. E. coli was the most sensitive in this regard. It failed to grow in a penicillin concentration of 200 units per ml. even after 48 hours, yet showed the least change in morphology as far as filaments and swellings were concerned. The next most susceptible organism was A. aerogenes which grew in a penicillin concentration of 450 units per ml. at the end of 24-hour incubation but failed to grow in a concentration of 2,500 units in 48 hours. The most resistant of the group was Proteus, which gave clearly visible growth even in a concentration of 4,200 units per ml. by the end of 12 hours. But although Proteus was the most resistant of the three to growth inhibition, the morphological changes, especially filament formation, were more marked in this organism than in either E. coli or A. aerogenes. There was no appreciable effect on motility of Proteus or E. coli. Even the long filaments and swollen forms were actively motile.

As can be seen in Table 2 there were no physiological changes which could be demonstrated by the criteria employed. Even those subcultures made from tubes containing mostly morphological variants failed to show any variation from the cultural reactions which are typical for the species.

In the case of Prot. vulgaris a second series of tests was conducted in which various concentrations of penicillin were added to tubes containing 5 ml. of a culture already 24 hours old. Since the drug had no demonstrable effect at any concentration the detailed data on this series are omitted.

Discussion

The abnormal morphological changes noted seemed to be due to interference with the growth process since they were noted largely in the first few hours of exposure to penicillin. If this is true it would be expected that no morphological changes would occur when various concentrations

TABLE 1.—*Morphology of Organisms Growing for Different Periods at 37.5±0.5° C. in Brain Broth Containing Various Concentrations of Penicillin Sodium*

| Hours of Incubation | Organism | Penicillin Concentration in Oxford Units/ml. | | |

TABLE 2.---*Cultural Reactions of Organisms Following Incubation at 37.5±0.5° C. for 12 and 24 Hours in Brain Broth Containing Penicillin Sodium*

Test	Organism	Hours Exposure to Penicillin Before Testing	Penicillin Concentration in Oxford Units/ml.									
			12.5	25	50	75	100	200	450	2500	4200	Control (0)
Indole Production	E. coli	12	←			Positive		→				+
		24	←			Positive		→				+
	A. aer.	12	←			Negative		→				−
		24	←			Negative		→				−
	Prot.	12	←			Negative		→			→	−
		24	←			Negative		→			→	−
Methyl Red Test	E. coli	12	←			Positive		→				+
		24	←			Positive		→				+
	A. aer.	12	←			Negative		→				−
		24	←			Negative		→				−
	Prot.	12										
		24										
Voges-Proskauer Reaction	E. coli	12	←			Negative		→				−
		24	←			Negative		→				−
	A. aer.	12	←			Positive		→				+
		24	←			Positive		→				+
	Prot.	12	←			Negative		→			→	−
		24	←			Negative		→			→	−
Citrate Utilization	E. coli	12	←			Negative		→				−
		24	←			Negative		→				−
	A. aer.	12	←			Positive		→				+
		24	←			Positive		→				+
	Prot.	12	←			Positive		→			→	+
		24	←			Positive		→			→	+
Metallic Sheen on EMB Agar	E. coli	12	←			Positive		→				+
		24	←			Positive		→				+
	A. aer.	12										
		24										
	Prot.	12										
		24										
Gelatin Liquefaction	E. coli	12										
		24										
	A. aer.	12										
		24										
	Prot.	12	←			Positive		→			→	+
		24	←			Positive		→			→	+
Motility	E. coli	12	←			Positive		→				+
		24	←			Positive		→				+
	A. aer.	12										
		24										
	Prot.	12	←			Positive		→			→	+
		24	←			Positive		→			→	+

of penicillin were added to 24 hour cultures of Proteus. This view is in accord with that of Dubos,[4] Mellon,[5] Fisher[6] and others.

From the results obtained when the Imvic and other criteria were applied to organisms previously exposed to penicillin *in vitro* it would seem that the atypical gram-negative rods encountered in routine examinations of feces and urine specimens are not penicillin-altered forms of E. coli, A. aerogenes, or Proteus but perhaps are members of the paracolon group which has been comprehensively described by Schaub.[7] However, this interpretation must be tentative for two reasons. In the first place, exposure of organisms to penicillin in the culture tube is by no means the same as chemotherapy *in vivo*. Secondly, here the bacteria were under the influence of penicillin for only a few hours whereas in a patient under treatment this period would ordinarily extend over days or weeks. Schwarz and Lazarus[8] have shown very recently that another antibiotic, streptomycin, can cause microbic dissociation *in vivo* which is manifested by changes in colonial morphology and virulence and which is also temporary.

Summary

1. Marked morphological changes were induced in the three test organisms. The variant structures were filaments, swellings, and coccal forms.
2. These changes were temporary, each organism reverting to its characteristic short rod form within 48 hours.
3. There was a definite difference in the susceptibilities of the organisms to growth inhibition by penicillin sodium, E. coli being the most susceptible, A. aerogenes next, and Prot. vulgaris the least affected.
4. Penicillin sodium had no demonstrable effect on the motility of Prot. vulgaris or E. coli.
5. There were no changes in cultural characteristics which could be demonstrated by the identifying tests commonly employed in the clinical laboratory.
6. The drug had no effect when added to 24-hour cultures of Proteus.
7. The significance of these observations is discussed.

[4] Dubos, R. J.: Antimicrobial Agents of Biologic Origin, J.A.M.A. 124: 633 (March 4) 1944.

[5] Mellon, R. R.: Studies in Microbe Heredity. I. Observations on a Primitive Form of Sexuality (Zygospore Formation) in the Colon-typoid Group, J. Bact. 10: 481 (Sept.) 1925.

[6] Fisher, A. M.: A Study on the Mechanism of Action of Penicillin as Shown by Its Effect on Bacterial Morphology, J. Bact. 52: 539 (Nov.) 1946.

[7] Schaub, I. G.: Paracolon Bacilli and Their Relation to Urinary Tract Infections, J. Lab. & Clin. Med. 31: 958 (Sept.) 1946.

[8] Schwarz, L. H., and Lazarus, J. A.: Streptomycin in the Treatment of Pyocyaneus Infections of the Urinary Tract, J. Bact. 53: 128 (Jan.) 1947.

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[EDITORIALS]

THE NEW NURSE PRACTICE ACT*

September 28, 1947

To the Editor:

I had planned for some time to write you concerning the Territorial Nurses' Practice Act (Act 103 of the 1945 session of the legislature, amending Chapter 52 of the Revised Laws of Hawaii 1945), but deferred doing so in hopes that the amendments by the recent legislative session would correct some of the law's inadequacies. This hope has failed; the revised act (Act 240 of the 1947 session) has not changed a single point of the items to be discussed.

It seems astonishing that everything which I have so far seen in print regarding this act has been favorable. Can it be that those concerned have not thought the matter through to its logical conclusions? Personally, I consider the law unworkable and injurious. My reasons follow:

The law's most enthusiastic proponents admit that it is not workable at present, but claim that it will be when schools for practical nurses are functioning and a few classes have been graduated. Let us look ahead, then, to that happy time and forecast the situation:

There will be, as today, too few graduate nurses. More power to them!

There will be, perhaps, a few more practical nurses, some trained in the new schools, more the remnant of the present unregenerate day of licensing on a basis of experience. There will not, of course, be enough to fill all needs.

Hospitals, as today, will not have enough nurses to care for all patients. If they employ untrained nurses, or nurses' aids, or orderlies, to perform simple nursing functions, the hospital will not be violating the law, but the employees will be. To take extreme but accurate cases: If a regularly employed hospital orderly, not licensed as a practical nurse, hands a urinal to a patient (a service which surely requires expert training and skill!) he will be subject to a fine of not more than five hundred dollars. If a doctor's office secretary, not a licensed nurse, puts a thermometer in a patient's mouth and reads the result, she will be subject to the same fine. If an indigent neighbor is willing to help a sick person for a slight fee, she may feed him his regular food; but if the doctor orders a diet, the neighbor violates the law by feeding it to the patient. I believe that such absurdities make the present law indefensible. And if you question my statements, I refer you to the amended law, sections 2770 and 2780, and to the Attorney General's decision as recorded in the July-August number of the HAWAII MEDICAL JOURNAL, page 456.

There is no doubt in my mind that Kalaupapa Settlement could not continue to function under a strict interpretation of the act, without serious loss of efficiency; and I strongly suspect that the same situation would apply in many plantation hospitals. Making exceptions here and exemptions there is not an adequate solution, nor would a declaration of perpetual emergency be anything but an admission of the law's inadequacy. The law is basically at fault, and should be changed. I have a suggestion; perhaps there is a better:

Rewrite the law for the next legislature. Keep the special schools and licensure for practical nurses; make the proposition as attractive as possible, and get as many as will to take this special training. But do not close the door on those who cannot, or will not, take a course of a year or more to learn how to put a spoon in a patient's mouth. Instead, establish a third, untrained group (call them what you will) who may practice legally but on a lower rating (including salaries) than the trained and licensed practical nurse.

Meanwhile, let the board declare an emergency (caused by the lack of skill shown in writing the present law) until the legislature meets again, so as to exempt from penalty those who perform "for pay" simple functions which do not require specialized training, and which constitute professional nursing only by virtue of a legal definition.

If I am wrong, please show me. If I am right, something should be done. The nurses are apparently unwilling to take action. Let's have free discussion of this important matter. Let's counteract the nurses' "Isn't it wonderful?" propaganda by publicity, so that an enlightened professional and public opinion may ask the next legislature for a good and workable law.

NORMAN R. SLOAN, M.D.

* "The above expressed opinions are those of the writer, and do not represent the official policy of any government department."

To the Editor:

The Board for the Licensing of Nurses is happy to have the opportunity to reply to Dr. Sloan's letter as printed in this issue of the JOURNAL, in order to clarify the issues it raises.

Dr. Sloan states that the law for the licensing of practical nurses is not workable because there will not be enough licensed and professional nurses to fill the needs of the Territory. Reports on December 11, 1947 from hospital administrators in Honolulu, officials of the Territorial Hospital Association, the Nursing Service Bureau and from the Territorial Board of Health indicate that few if any positions for either professional or practical nurses remain unfilled except those requiring special preparation for teaching or supervision. There are 1,742 professional nurses and 772 practical nurses now licensed in the Territory. It is expected that 75 students will be graduated from the new course of training for practical nurses by December, 1948. Plans to make use of facilities on other major islands and for conducting evening and part-time courses for employed practical nurses will increase the output of persons fully qualified for licensing. It is expected that replacement needs will be met from this group.

A report on page 649 of the November 8th issue of the *Journal of the American Medical Association* states that nursing needs are increasing by being met on the mainland.

In answer to Dr. Sloan's reference to "extreme and accurate cases" we quote Section 2779 of the Nurse Practice Act (1947). "The provisions of this chapter shall not be construed as prohibiting gratuitous nursing by friends or members of the family, or as prohibiting the incidental care of the sick by domestic servants or persons primarily employed as housekeepers, as long as such persons do not practice nursing within the meaning of this chapter, or as prohibiting nursing assistance in the case of emergency...." This section seems to us to make clear that auxiliary workers can perform occasional simple duties such as "handing a urinal to a patient."

It is recognized that a hospital for the care of Hansen's disease [leprosy—ED.], such as Kalaupapa Settlement, may present exceptional circumstances. Nevertheless we see no reason why the patients employed as practical nurses cannot conform to the requirements of the law. It is suggested that a few such patients be selected for training at the Settlement in the arts of practical nursing and that there be a redistribution in assignments of other workers to include non-nursing duties only. The patients chosen and trained by the professional nurses to perform duties as practical nurses could then be licensed without exception to the law.

In order not to disrupt present hospital service or to deprive persons now employed as practical nurses of their livelihood, we have found it necessary to license practical nurses by waiver at present under the emergency clause in the law. When it is to the best interests of the community, we will cease to use the emergency clause.

The Board agrees with Dr. Sloan that a group of auxiliary workers such as porters and maids, is essential to the efficient operation of a hospital. Such workers have been widely used in hospitals for many years. The law makes no requirement for the licensing of such workers who perform non-nursing duties. Therefore, the Territorial Board for the Licensing of Nurses sees no value in rewriting the law.

We call attention to the fact that many other groups of persons following trades or professions directly or indirectly affecting the health and safety of the public are licensed for the express purpose of protecting the public from untrained persons and imposters, namely, physicians, dentists, barbers, cosmeticians, plumbers, engineers, masseurs, undertakers, physical therapists, occupational therapists, optometrists, dental hygienists, medical technicians, electricians, professional nurses and others.

The aim of the Nurses Association, Territory of Hawaii and the Board for the Licensing of Nurses in promoting this Act and carrying out its intent is to provide a better quality of nursing care for the patient and more valuable help for the physician.

We shall be glad for suggestions which bring us closer to this aim.

BOARD FOR THE LICENSING OF NURSES
TERRITORY OF HAWAII
JOHN WM. DEVEREUX, M.D.
Secretary

LOWERING THE COST OF HOSPITAL CARE

New York's Montefiore Hospital is trying, according to the December 9 issue of *Look* magazine, a new experiment to reduce the cost of chronic illness: home extension service as a substitute for prolonged hospital care. Headed by one physician, Dr. Martin Cherkasky, who supervises (with one full-time and one part-time assistant) the care of 45 chronically ill patients, the service is known as Home Care. Hospital beds are provided when needed; nursing service is made available to whatever extent is necesary; x-rays and electrocardiographs are obtained with portable equipment; members of the family are instructed in simple nursing procedures; paracenteses and infusions are given when required; and so on. It is said that patients seem to get well faster in the relatively agreeable surroundings of their own homes than they might have been expected to in the hospital.

The plan is not necessarily applicable to any and all communities, but it certainly appears to be a step in the direction of lowering the costs of hospitalization—which, as Mr. Clemens said of weather, gets talked about oftener than it gets anything done about itself.

MEMORIAL TO DR. JAMES R. JUDD

To the County Medical Society of Honolulu:

We, the nurses of "The Old Guard," 1917-1927, do offer to the Medical Society as our memorial gift to the late Dr. James R. Judd, a 10 year subscription to *Archives of Surgery* and 4 years to *Surgical Clinics of North America.* Trusting that these Journals will be acceptable and of much interest to you all,

MARY E. MERRILL, R.N.
for our group.

Through the HAWAII MEDICAL JOURNAL I would like to express my deep appreciation and grateful thanks to all the nurses of "The Old Guard," 1917-1927, who responded to the plea that we make some fitting memorial to the late Dr. James R. Judd. Many of us had worked for him, admired his surgical ability, or had an affectionate regard for him.

Through the helpfulness and kindly suggestions of Dr. Rogers Hill, President of the County Medical Society, and Dr. R. N. Perlstein, acting for Dr. Hastings Walker, Chairman of the Honolulu County Medical Library Committee, we have accepted the suggestion that our memorial gift to the Library shall be a 10 year subscription to *Archives of Surgery* and 4 years of *Surgical Clinics of North America,* these two journals costing us $152.00 of our subscribed $162.00, the balance going to the Social Service of Queen's Hospital, which was a pet interest of Dr. Judd's.

At first thought you may be disappointed in the choice of Journals, feeling it will not be a perpetual memorial; but the Journals, I am informed, are bound and filed away and are used frequently by the Doctors for references. These when bound will be marked with the Library book plate which will bear some notification that it is our memorial gift; also as each number is received it will be stamped in a way to mark it as our gift.

Again thanking you heartily for your cooperation, I am

Sincerely yours,
MARY E. MERRILL, R.N.

The list of donors follows:

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Dear Miss Merrill:

The thanks of the Honolulu County Medical Society and the Honolulu County Medical Library are extended herewith to you and your fellow donors for the thoughtful and generous memorial gift of the medical journal subscriptions, honoring the memory of Dr. James R. Judd.

I venture to predict that your fears about the gift's impermanence will prove groundless, for when these subscriptions expire, in four and again in ten years, it will be strange indeed if another group of Dr. Judd's friends cannot be found to renew them—and still another when they again expire. I suspect you have founded a permanent memorial to your old friend and ours. We all thank you.

HARRY L. ARNOLD, JR., M.D.
Secretary
Honolulu County Medical Society

COMMUNICABLE DISEASE CONTROL TERRITORY OF HAWAII

The control of communicable diseases has long been recognized as the first requisite for safeguarding and promoting a high standard of community health. The monograph entitled "Communicable Disease Control," recently published by the Postwar Health Planning Committee of the Chamber of Commerce of Honolulu, represents a progressive step in this direction and a new approach in the presentation of such information. The study is divided into four sections, including leprosy, tuberculosis, venereal diseases, and other communicable diseases. Material is presented in terms of legal status, covering control measures; existing facilities; personnel; and current control programs. Both immediate and long-range objectives are recommended under the above-named categories. This procedure makes it possible to scrutinize quickly the present situation of the different phases of the program. Every outline is supplemented by a narrative report which elaborates more in detail on the needs as set forth for strengthening existing control machinery.

Each report has been prepared under the direction of a chairman and a special subcommittee. With the exception of two lay individuals, members of the subcommittees were physicians interested in these special problems. Dr. Samuel D. Allison functioned as the overall chairman of the study groups. Dr. Harry L. Arnold, Jr., served as chairman for the section on leprosy; Dr. Hastings H. Walker acted in a similar capacity for tuberculosis; Dr. Allston Gourdin directed the venereal diseases group; and Dr. James Enright, the committee on other communicable diseases. Copies of these studies may be obtained from the office of the Public Health Committee, Chamber of Commerce of Honolulu.

LUMBAR PUNCTURES: MORE, OR FEWER? AND WHERE?

The neurosurgeon, judging from the opinions expressed elsewhere in this issue by Dr. Cloward, thinks far too many lumbar punctures are being done. No doubt he is correct. The dermatologist, and the psychiatrist, on the other hand—conditioned as they are by their common concern with general paresis—are chronically unhappy because too *few* lumbar punctures are being done. No doubt they, too, are correct. What it might be boiled down to is this: that the decision as to whether to do a lumbar puncture or not to do it is often based on unsound reasons.

As Dr. Cloward properly emphasizes, a lumbar puncture may be (1) completely uninformative (or even misleading), or (2) actually dangerous. Like many other laboratory tests, it should be ordered as part of a definite plan rather than just haphazardly; and it should never be done unless the results might affect the management of the case.

When I was an interne, lumbar punctures were regarded as an in-patient procedure in the Dermatology Department and as an out-patient procedure in the Neurology Department. Now Dr. Cloward urges hospitalization for lumbar puncture, while I do them in the office; he says post-puncture headaches are more frequent if patients remain ambulatory following the tap, while I have rarely encountered any such reaction since I stopped, three years ago, requiring any rest period at all following the procedure.

Perhaps we could compromise. Perhaps spinal taps could be done in the hospital except where the diagnosis of asymptomatic neurosyphilis is concerned. For there is no way to make this diagnosis except by examination of the cerebrospinal fluid; and it is hard enough to accomplish this now, without requiring the time and expense of the hospitalization.

HARRY L. ARNOLD, JR., M.D.

DELAY IN DIAGNOSIS OF CANCER

The public's increased cancer-consciousness is bringing patients to doctors earlier than formerly. But are doctors contributing their share toward prevention of delay in the diagnosis of cancer?

Cancer-consciousness in the public is being stimulated by a widespread educational program conducted through radio, newspapers, and magazines. The October, 1947, issue of the *Women's Home Companion*, for example, contains a featured article by Clive Howard entitled "Cancer of the Womb," in which the Papanicolaou technique for early diagnosis of uterine cancer with vaginal smears is described and highly praised. This sort of thing will create a demand for such services with which the profession should try to keep pace.

Leach and Robbins of Memorial Hospital in New York reported in the J.A.M.A. last September the results of a study designed to show (1) whether the responsibility for delay in diagnosis of cancer belonged more to the physicians or more to the patients, and (2) whether any improvement had occurred since a similar study was made by Pack and Gallo in 1938. Their conclusion was that, while both patients and physicians were culpable in varying degree, the blame in 1946 fell *oftener on the physician* and *less often on the patient* than in 1938. Inadequate examination by the physician originally consulted was an outstanding source of error and delay. They urged, as remedial measures, the following: (1) *consultation* if no diagnosis is made after one month's observation; (2) *prompt treatment* or proper advice as soon as a diagnosis is possible; (3) *consultation* if the response to treatment seems inadequate.

In summary, then, physicians should ask themselves whether they are doing all they can to prevent delay in diagnosis of cancer. Thoroughly adequate initial examinations, consultations as indicated, and attentive reception of such new aids as Papanicolaou's vaginal smear technique seem in general to point the way toward a better performance in the early diagnosis of cancer. The vaginal smear should be used as an aid and not as a substitute for pelvic examination, biopsy, and dilatation and curettage in the diagnosis of uterine cancer. Cancer can only be cured if it can be found —and found early!

"SEMINAR" ON RENAL PHYSIOLOGY

Sharp and Dohme's quarterly *Seminar* for August, 1947, contains sixteen pages on renal anatomy and physiology that surpass for clarity, conciseness, and beauty of illustrations, anything we have seen published on this or any other medical subject. Nine clear schematic diagrams in color illustrate the physiology of urinary secretion in detail, with specific reference to glucose and penicillin and to fluid balance and renal circulation. The normal kidney and its injected vascular supply are shown in color on one page, and there are two more pages of color photomicrographs showing the microscopic structure of the organ.

If you didn't see this issue it is worth your trouble to send for it: the address is Philadelphia 1, Pennsylvania. This sort of thing is advertising at its best.

CASE REPORTS

UTEROTUBAL IMPLANTATION: REPORT OF A CASE FOLLOWED BY SPONTANEOUS DELIVERY AT TERM

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The following case is considered worthy of report because of the apparent paucity of succesful cases to be found in the literature and the general pessimistic attitude associated with plastic procedures on the oviducts for the purpose of overcoming sterility due to tubal occlusion.

Case Report

Mrs. K. L., a 33 year old married Caucasian civilian secretary, was first seen in my office on November 16, 1945, because of low backache, sterility and other unrelated symptoms. The backache and the other symptoms responded rapidly to symptomatic treatment. The patient had been previously married and had been pregnant once. That pregnancy had ended in a spontaneous abortion at four months. At the time seen by me, the patient had been remarried for five years and had not been able to conceive during that period of time. Past medical history revealed that "an ovary, appendix and part of another ovary" were removed in 1940. There was a two stage thyroidectomy performed in 1942 and 1943, followed by oral administration of thyroid for some time thereafter. The patient denied any venereal diseases. Menstrual history: Menarche at twelve. Catamenia always regular with a twenty-eight day cycle while on the mainland and a twenty-one day cycle after arriving in the Territory. No leukorrhea, dysmenorrhea, menorrhagia or metrorrhagia. Associated with the shortened menstrual cycle there was easy fatiguability and rapid weight gain. There were no notable familial diseases and the patient reported that she was one of a family of seven children.

Physical examination revealed a well developed and well nourished, intelligent Caucasian woman who was alert, cooperative and in no obvious distress. The pertinent findings for the purposes of this paper consisted of a slight retroversion of the uterus with the fundus pulled over toward the right. The cervix of the uterus was firm, smooth and non-patulous. The uterus was of normal size and contour and was slightly fixed in position. The adnexae were not palpable because of a slight panniculus. The thyroid gland was not palpable and there was no evidence of thyroid dysfunction.

Laboratory studies revealed a blood count and urinalysis within normal limits. A chest x-ray failed to reveal any pathological findings. The husband's spermatic fluid was examined from a condom specimen on November 17, 1945 and was found to contain numerous well formed, active spermatozoa with no aberrant forms.

A Rubin insufflation and a dilatation and curettage were performed on December 4, 1945. Patency of the oviducts could not be demonstrated even after prolonged pressure of 200 mm. of mercury. The curettings revealed normal endometrial tissue in the follicular phase.

Despite my pessimism, the patient insisted that nothing be left undone in an effort to render her fecund, and a plastic restoration of tubal patency was attempted on January 16, 1946. The technique employed embodied the principles of Holden and Sovak[1] as modified by Spangler,[2] Green-Armytage[3] and the particular situation as it existed in this case. Numerous dense fibrous adhesions were found between the uterus and the right oviduct. It was found that the left ovary, the left oviduct and the appendix had been previously surgically removed. The remaining ovary (right) was cystic and had a thickened capsule. The fimbriated ostium of the right oviduct was free of adhesions and the oviduct was found to be patent as far as the right cornu of the uterus by retrograde insufflation with air. The adhesions about the oviduct were carefully divided and all minor bleeding points were controlled by crushing with a fine hemostat, rather than by ligation. The oviduct was then divided near the cornu by means of a scalpel and then split longitudinally. The anterior surface of the body of the uterus was incised down to the uterine cavity in the midline near the fundus and the split oviduct was carefully anchored to the inner wall of the uterus as in the technique of Holden and Sovak. The incision in the uterus was then closed by a double layer of plain interrupted catgut sutures. There was no retrograde insufflation of the oviduct performed at the completion of the operation as it was felt that the procedure had no therapeutic indication and that unnecessary manipulation was unwarranted. Delicate handling of tissue was stressed throughout the entire operation and the oviduct was manipulated, as far as possible, by grasping only the serosa.

The postoperative course was smooth, complicated only by a slight cough and a slight amount of vaginal bleeding. Penicillin and cevitamic acid were the only specifics given during the patient's hospital stay and she was discharged on the seventh postoperative day with a well healed wound.

Five months after the operation the patient left the Territory for the mainland. The only other point of note in her postoperative course is that she suffered with a severe dysmenorrhea at each catamenia.

The patient was seen by Dr. Hans Seligman of Groton, New York on September 18, 1946 and I am indebted to him for the following report. The last regular catamenia the patient had was on August 3, 1946 and she had a slightly bloody vaginal discharge when first seen by Dr. Hans Seligman. The bleeding stopped within two days on a regimen of Progesterone, bed rest and vitamin E. On October 19, 1946, the uterus was found to be of the size of a three months pregnancy, the right adnexae were very tender and the uterus was pulled over to the right. On November 17, 1946, the

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[1] Holden, F. C. and Sovak, F. W.: Reconstruction of the Oviducts: An Improved Technique with Report of Cases, Am. J. Obst. & Gynec. 24: 684 (Nov.) 1932.

[2] Spangler, C. M.: Operations for Sterility, S. Clin. North America 25: 1345 (Dec.) 1945.

[3] Green-Armytage, V. B.: Tubo-uterine Implantation for Sterility, Brit. M. J. 2: 6 (July 3) 1937.

deviation could no longer be demonstrated and the uterus was now of the size of a four months pregnancy. The prenatal course was marked by hyperemesis, anorexia, attacks of sharp right lower quadrant abdominal pain and a hyperchromic, macrocytic anemia. All of these responded well to treatment. The patient went into spontaneous labor and delivered a normal female infant of seven pounds and fifteen ounces in ROA after a seventeen and a half hour labor. There was considerable uterine bleeding immediately after the delivery but this stopped rapidly after the administration of ergot and Pitocin.

Comment

J. P. Greenhill[4] reports that the first case of pregnancy following a tubal implantation was reported by T. Watkins in 1896. This pregnancy terminated as a miscarriage. The first full term pregnancy producing a viable infant was reported in 1922 by Thomas S. Cullen.[5] This particular case had been previously pregnant in 1921 (after the reconstruction had been performed) but that pregnancy terminated as an abortion in the seventh month of pregnancy. Since that report, plastic procedures with varying success have been reported by others, among whom are Sovak,[6] Holden,[7] Solomons[8] and Norris.[9] Isolated statistics on implantation techniques are difficult to find, as most papers report the statistics for plastic procedures in general. Most papers are generally pessimistic regarding reconstruction operations, but at least one author, Greenhill,[10] reported a more optimistic outlook in a paper written after a previous highly pessimistic one. His revised opinion was based on the report of Lastra and Jacob who had four pregnancies result after ten tubal implantations. Of these four, three had full term pregnancies. Siegler[11] reported that in twenty-three cases of tubal occlusion undergoing various plastic procedures, four conceived and delivered at term. Of the remaining nineteen, tubal patency was established in fourteen. Von Graff[12] reported a series of seventy cases of uterotubal implantation in which twenty-six subsequently became pregnant. Twenty-three of these went to term. Norris[9] reported a series of eight cases of uterotubal implantation of which four subsequently became pregnant. Three of these delivered spontaneously at term and the other was delivered by elective Caesarian section. Most other writers report only the demonstration of tubal patency after the procedure and make no mention of the number of live births resulting therefrom.

Summary

A case of sterility due to an occluded oviduct treated successfully by uterotubal implantation is presented.

It is suggested that uterotubal insufflation postoperatively may be contraindicated.

In my opinion, plastic reconstruction of the oviducts is indicated in certain selected cases and a more optimistic outlook seems justified in the light of more recent reports.

[4] Greenhill, J. P.: Evaluation of Salpingostomy and Tubal Implantation for the Treatment of Sterility, Am. J. Obst. & Gynec. 33: 39 (Jan.) 1937.

[5] Cullen, T. S.: A Normal Pregnancy Following Insertion of the Outer Half of a Fallopian Tube into the Uterine Cornu, Bull. Johns Hopkins Hosp. 33: 344 (Sept.) 1922.

[6] Sovak, F. W.: Operative Treatment of Sterility, Am. J. Surg. 30: 406 (Sept.) 1936.

[7] Holden, F. C.: Pregnancy and Delivery at Term Following Reconstruction of Oviducts, Am. J. Obst. & Gynec. 32: 346 (Aug.) 1936.

[8] Solomons, B.: Sterility, with Special Reference to Surgical Possibilities, Surg., Gynec. & Obst. 60: 352 (Feb.) 1935.

[9] Norris, C. C.: The Surgical Treatment of Sterility Caused by Occlusion of the Fallopian Tubes, Surg., Gynec. & Obst. 58: 741 (April) 1934.

[10] Greenhill, J. P., in Yearbook of Obstetrics and Gynecology, Yearbook Publishers, Chicago, 1942, p. 376.

[11] Siegler, S. L.: Fertility in Women, J. B. Lippincott, 1944, p. 401.

[12] von Graff, E.: Operative Treatment of Female Sterility (Tubal Implantation), J. Iowa M. Soc. 26: 31 (Jan.) 1936.

[13] Polowe, D.: A New Technique for Reconstruction of the Oviducts, Am. J. Surg. 68: 208 (May) 1945.

[14] Curtis, A. M.: A Textbook of Gynecology, ed. 3, Philadelphia, W. B. Saunders, 1938, p. 421.

[15] Sovak, F. W.: Tubal Pregnancy in a Case of Bilateral Tubal Implantation, Am. J. Obst. & Gynec. 32: 344 (Aug.) 1936.

POST-GRADUATE LECTURES

VI. RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF THYROID DISORDERS*

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Although more is known concerning the thyroid gland than any other endocrine organ, our knowledge still advances at a rapid pace. The important differentiation between exophthalmic goiter and toxic adenoma has been accepted by a majority of students of the disease; recent years have seen the development of surgery of the thyroid gland almost to the state of perfection; the danger of development of thyroid malignancy, especially in nontoxic thyroid adenomas, has been emphasized; the mechanism of thyroid heart disease is more clearly understood; it has been demonstrated that the basal metabolic rate and blood cholesterol estimations are reliable diagnostic tests in thyroid disorders; the isolation, determination of the chemical structure, and simplification of the synthesis of thyroxine has been accomplished; experience has shown that thiouracil and propylthiouracil are antithyroid drugs of great promise. Certain aspects of these topics and some remarks concerning myxedema have been selected for discussion in this article.

The Diagnosis of Toxic Goiter

The diagnosis of toxic goiter is not difficult in patients who have a sizable enlargement of the gland, exophthalmos, and other obvious evidences of the disease. It is the atypical cases, in which the so-called classical signs are minimal or absent, which are overlooked. Without entering into the differential diagnosis of toxic thyroid conditions, I should like to emphasize the following five helpful points in regard to the diagnosis. Patients with toxic goiter usually present all, or four out of five, of the following diagnostic criteria:

1. **A loss of 10 to 20 pounds or more of body weight despite a good appetite.**
2. **Complaints of continuous excessive warmth and sweating.**
3. **A tachycardia, even at rest, of 90 per minute or greater.**
4. **A basal metabolic rate of plus 20 or higher.**
5. **A blood cholesterol of less than 220 milligrams per 100 cc. of blood.**

Of considerable importance also is the mental status of patients with toxic thyroid disease; they often show characteristic changes, as follows: They are over-alert, hyperactive, emotionally unstable, and show increased mental irritability. Unlike the psychoneurotic, they usually underestimate their symptoms, and resent being placed at rest in bed.

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Parts 6 and 7, concluding the series of lectures. A limited number of reprints of the entire series is available on application to the editorial office of the JOURNAL.—ED.

Differentiation Between Exophthalmic (Diffuse Toxic) Goiter and Toxic Adenoma

It is important in all instances to differentiate between the two types of toxic goiter, and this can almost always be accomplished because there are usually well marked differences. It is known that toxic adenoma rarely occurs before the age of 30 years; that commonly there is a history of a goiter, often of considerable size, for a period of 12 to 14 years or even longer; exophthalmos is lacking, and the gland is generally large and nodular. In addition, there are some important characteristics which should always be kept in mind, as follows: Patients with toxic adenoma are more likely to be cured by subtotal thyroidectomy, as there is rarely a recurrence of the condition following this operation; they do not react as favorably to the administration of iodine; malignancy may develop in such types of goiter; thyroid crises or "storms" rarely if ever occur; thyroid heart disease is observed more commonly in this type of goiter; and pressure symptoms are more frequently encountered.

Antithyroid Drugs

Based largely on the early work of Astwood, certain antithyroid drugs were introduced into clinical medicine and have now had several years of clinical trial with most promising results. One of the most potent was thiouracil, which is related to urea but it is a closed ring with six carbon atoms with a C=O linkage which appears to be important in drugs which have this action.

It was soon discovered in humans that this preparation had the following action: In patients with thyrotoxicosis, it prevents the formation of thyroxin in the thyroid gland, apparently by blocking the addition of iodine to the tyrosine molecule which is the normal process leading to the formation of thyroxine. When this occurs, the thyroxine which is already present in the thyroid gland is gradually utilized during a period of several weeks. Following the depletion of the thyroxine content of the gland, then the level of this hormone in the circulating blood falls below normal limits. This diminution serves as a stimulus to the anterior pituitary gland to produce more thyrotropic hormone and this in turn acts on the thyroid gland to produce hyperplasia and increased vascularity. Although the gland thus stimulated appears to be hyperplastic, and, therefore, one which is hyperactive in producing the thyroid hormone, such increased functional activity does not actually occur. This is because the building materials, the tyrosine and iodine, from which the thyroxine is synthesized, are blocked in such a way that the iodine cannot be added to the tyrosine to form thyroxine.

The Action of Thiouracil

In association with Dr. Wm. H. Beierwaltes, Assistant Professor of Medicine at the University of Michigan, I have administered thiouracil to over 120 patients with toxic goiter. The usual initial dose was 0.2 gram three

times daily, which was reduced to 0.4 gram daily when the basal metabolic rate reached +15. When it fell to 0 or less, the dose was reduced to 0.2 gram daily and continued thereafter in most patients for a period of 6 months. We have arrived at these conclusions cencerning the action of this drug:

1. Within 3 to 5 weeks the basal metabolic rate in almost all patients becomes greatly diminished or reaches normal limits.

In many instances it is below 0. If the patient had a large gland, which probably means that a considerable amount of thyroxine was stored in it, a longer time was required for the rate to reach normal. The same was true if the patient had received iodine immediately prior to the thiouracil therapy. In general, it may be said that within 2 months, in almost all cases, the basal metabolic rate was well within normal limits, the patient had gained weight, the pulse rate was normal, and material improvement was undoubtedly present. In my opinion the results attained by thiouracil are much more satisfactory than those following the use of iodine.

If the drug is given in doses of 0.2 gram daily, after the basal metabolic rate had reached normal, for a period of at least 6 months, it is good insurance that the patient will remain in a satisfactory state of remission for a long period. In the few patients in whom there was a recurrence, evidence of this appeared within the two months following the discontinuance of the drug. The possibility that thiouracil or related compounds may be used as a medical form of treatment of toxic goiter, especially of the exophthalmic type, must be given consideration but remains for further observation to demonstrate conclusively.

2. Thiouracil is not an innocuous drug.

Its untoward actions must be watched. There are only two ill effects of a serious nature, the most important being *agranulocytosis* and the other a *febrile reaction.* The latter is of minor importance as compared to the agranulocytosis, and may be in many instances controlled by discounting the drug and resuming it within a few days. Usually the patient is then able to tolerate it without difficulty. If repeated febrile reactions occur, however, it may be necessary to abandon its use; but this has never been necessary in my experience.

The possibility that a patient who is receiving thiouracil may develop agranulocytosis should always be kept in mind. Such a serious complication occurred 6 times in 120 patients in our group. In each instance, the patient recovered when the drug was discontinued and large doses of penicillin were administered. *In all patients, after 10 days to 2 weeks, the drug was resumed in the same dosage, and with one exception it was well tolerated* for a long interval without the slightest evidence of an untoward effect. One patient who refused to consider a thyroidectomy was again given the drug in the usual dose and within a few weeks had a second attack of agranulocytosis, from which she recovered. Following this she took our advice and had the operation with satisfactory results.

Every patient who receives thiouracil should be warned that it may cause chills, fever, a skin rash, and sore throat. If any of these symptoms should appear, *all medication should be discontinued at once,* and a white blood cell count should be done. When this is low, penicillin therapy is at once indicated. If these measures are carried out promptly there is no reason why a patient with agranulocytosis should succumb.

The Use of Propylthiouracil

More recently propylthiouracil, which is closely related to thiouracil, has been introduced as an improved antithyroid agent. This is supposed to be as potent and less toxic. In treating about 50 patients with this drug, it is my conclusion that the original proposed dosage of 50 milligrams three times daily is effective, but less so than thiouracil in doses of 200 milligrams three times daily. In no instance, however, have I observed any ill effects from the drug. Others who have studied its action have the same opinion when it is given in the advised dose of 150 milligrams daily. Evidence is accumulating, however, that the dose should be increased to 300 milligrams daily in order to produce results which are comparable to those produced by thiouracil. I doubt if agranulocytosis will be caused even in an occasional patient with this dosage, but further observation is necessary in order to determine this point. Patients who are receiving the drug should be warned concerning its use, in a way similar to those who are given thiouracil.

The Modern Treatment of Toxic Goiter

I still believe that in experienced hands the most effective form of treatment for all forms of toxic goiter is subtotal thyroidectomy. It should be remembered, however, that surgery does not produce uniformly good results. There are occasional recurrences, isolated instances of post-operative tetany, post-operative paralysis of the vocal cords, myxedema, and a small percentage of fatalities. Probably all patients with *toxic adenomas* should be treated by *surgery* because (1) the goiter may be unsightly, (2) it may cause pressure, (3) the operation will almost surely relieve the toxic symptoms and (4) the possibility of malignancy will be averted.

On the other hand, there should be a continuation of studies to determine if *propylthiouracil* will eventually be the most satisfactory method of treating *exophthalmic goiter.* In any event, the drug is an ideal one for the purpose of preparing all patients for a subtotal thyroidectomy, and in my opinion should be employed in all instances. It has the drawback that several weeks are necessary in order to prepare such patients but the operative risk is appreciably lessened, and the period of convalescence is undoubtedly shortened. It should be emphasized, morover, that never, in my opinion, is the operation for toxic goiter an emergency; and furthermore, one of the most reliable criteria of operability of such a patient is the state of general nutrition.

The justifiable criticism of the surgeon that goiter patients who have been prepared for operation with antithyroid drugs have an excessively vascular gland which bleeds easily may be circumvented by the administration of Lugol's solution, 5 minims three times daily for a period of two weeks prior to the operation.

Cancer of the Thyroid Gland

Cancer of the thyroid gland probably occurs more frequently than has been previously supposed, but in my opinion it is not as common as some recent statistics would lead us to believe. It is generally accepted that such malignancy arises always in an abnormal thyroid gland, and that the condition is of greatest incidence in a goitrous geographic region. The preceding lesion is most frequently an adenoma. The figures relating to the

incidence of cancer of the thyroid as stated by Cole and Slaughter (*J.A.M.A.* 127:883, 1945) are indeed disquieting. In a pathological study of 523 goiters, including those which were toxic, nontoxic, benign and clinically malignant, 7.2 per cent were found to be malignant. In 330 patients with the clinical diagnosis of toxic adenoma, 1.2 per cent were found to be neoplastic. It was in the nontoxic adenoma group, however, that the amazing incidence of cancer was reported: 17.2 per cent. Even more startling than this was the finding that in 92 patients with solitary nontoxic adenomas, 24 per cent were found to be malignant. In 100 multinodular, nontoxic adenomas the incidence was 11 per cent. To one who lives in a goiterous region and sees many nontoxic adenomas, especially small solitary nodules, it is indeed alarming to note such a figure. If it were true that such a remarkable per cent of patients with solitary nontoxic adenomas developed malignancy, there should be no hesitation insisting that all such growths be removed. There are two considerations, however, which make one hesitate to consider such a policy. One is that there would hardly be space in the hospitals to accommodate all such patients; and second, there is a reasonable doubt concerning the degree of accuracy with which malignancy of the thyroid can be recognized even by the most experienced pathologists. In support of this view I need only cite the statement from the sixth edition of Howard T. Karsner's *Human Pathology*, on page 693, in which he says, "Furthermore, the anatomic character of the thyroid is such that considerable difficulty is often encountered in diagnosing tumors [neoplasms—ED.]" And again on page 695 it is stated by this same author, "Any attempt at classification of carcinoma of the thyroid encounters many difficulties because of the wide variation in microscopic picture, and also because of the fact that tumors [neoplasms—ED.] microscopically which gave no indication of malignancy may metastasize widely."

The presence of a nodule in the thyroid gland nevertheless always raises the question in my mind as to the desirability of its removal. After having seen such patients in some instances develop a cancer of the thyroid, it is a spur to eliminate all possibilities of such a tragic occurrence. At present it is my custom to advise that all nodules in the thyroid gland whose diameter is greater than that of a silver half dollar be removed. This is on the grounds that such a nodule is likely to be visible and, to a certain extent, disfiguring; that it may become toxic; that ultimately pressure symptoms may develop; and finally that there is a possibility that malignant change may occur.

It is of some interest to note that *toxic adenomas*, according to Cole and Slaughter, become malignant in only slightly over 1 per cent of the cases. Furthermore, *never* in my experience have I seen a patient with a diffuse hyperplastic goiter (exophthalmic goiter) develop a neoplasm of the gland.

Some Important Points in Regard to Myxedema

It is not my intention to enter into a full discussion of this disease but I do desire to emphasize a few points in regard to its diagnosis and treatment. In the first place there is not a single important condition, for which a potent form of therapy is available, which is more frequently overlooked than myxedema. In the past 30 years, few patients with this disorder have entered the hospital with the correct diagnosis. There are two reasons for this: first, the physician does not keep the disease in mind; second, the patient is often so retarded mentally as a consequence of his disease, that it is utterly impossible to obtain an accurate history.

Diagnosis of Myxedema

The diagnosis is not difficult. Remember that it is not such a rare condition. Then look at the patient. If he has myxedema there will be *puffiness of the eyes*, especially of the upper lids; a *slow, low-pitched, husky voice* and difficulty in pronouncing words distinctly; the hands will be *cold and dry, not cold and moist* as seen in psychoneurotic patients, or hot and moist as in patients with thyrotoxicosis. The first question that you should ask such a subject is, "Do you suffer from the cold weather, and is there an absence of normal sweating?" If the answer to this is positive, then it is possible that the patient has myxedema and this should be confirmed by a basal metabolic rate, which is usually below —30, and a blood cholesterol, which is almost always above 300 milligrams per 100 cc. of blood, and often as high as 500 milligrams per cent.

I do not wish to imply that the disease is always recognized so easily. In some patients, even with careful laboratory studies, the diagnosis may still be in doubt. In such patients an additional therapeutic test should be performed. It is based on the knowledge that patients with myxedema are sensitive to the action of desiccated thyroid whereas a person with the normal thyroid function may require as much as 8 to 10 grains daily in order to produce even mild effects. The test in a patient suspected of having myxedema is carried out as follows: The patient's basal metabolic rate, blood cholesterol and body weight under standard conditions are determined. Desiccated thyroid is then administered in a dosage of 0.032 grams (½ grain), four times daily, for a period of two weeks. At the end of this time, the basal metabolic rate, blood cholesterol and body weight are again determined and the subjective status of the patient evaluated. If true myxedema is present, the basal metabolic rate will be increased, the blood cholesterol will be reduced, there will be a loss in body weight of several pounds, and the patient will testify that there has been convincing subjective improvement. *All criteria* will certify as to improvement; whereas if the patient does not have myxedema the evidence of an effect will be nil, or certainly not so uniform.

Treatment of Myxedema

My experience in treating myxedema in the past has made it clear that two mistakes commonly occur. They are: first, *the dose of desiccated thyroid is usually too large;* and second, *most patients relapse* because they are not kept under supervision for a sufficient period of time. I would recommend that the standard dose of desiccated thyroid for patients with myxedema should be *0.032 gram (½ grain)*, four times daily, until the basal metabolic rate is between —15 and —10. Then an average *maintenance dose of 0.065 gram (1 grain) should be given daily* thereafter in order to keep the basal metabolic rate at about that level, and the blood cholesterol at 220 to 250 milligrams per cent. In patients over 60 years, and in those with an associated anemia, or those with evidence of myocardial weakness, the dose should be less, varying from 0.032 (½ grain) three times daily, to as small as 0.032 gram (½ grain) daily from the very beginning of treatment. Naturally the physician is anxious to demonstrate to the patient the beneficial effects of the drug and hence there is a great temptation to give large doses in order to produce a prompt and

decisive response. In my own experience I have observed two patients with myxedema succumb to myocardial infarction, and another develop congestive failure, during the preliminary stages of treatment with doses which we would now recognize as excessive.

Almost all patients with the disease relapse. This is easily understood because it is difficult for patients to continue treatment when they are free from symptoms. In order to prevent this, the physician should emphasize that *it will be necessary for the patient to take this medication continuously for the remainder of his life.* Also, all patients with the disease should remain under the care of a physician indefinitely. After being first placed on a maintenance dose, they should return every three weeks for clinical evaluation, basal metabolic rate and blood cholesterol determinations, and eventually after they are well adjusted on their maintenance dose, every three months, and finally every six months thereafter.

VII. OBESITY

In my opinion, every practitioner should have a clear conception of the real dangers associated with the obese state, the mechanism of its production, and the simplest, safest, most comfortable and efficient method of causing the desired reduction in body weight. Even a superfiicial examination of life insurance statistics indicates that obesity is a real hazard as far as health and longevity are concerned. For example, if a person exceeds his ideal weight by fifty pounds at the age of forty-five years, the added risk is comparable to that imposed by valvular heart disease in an individual of the same age. These statistics show further that ten pounds overweight between the ages of forty-five and forty-nine years is associated with an 8 per cent higher death rate; twenty pounds overweight causes an 18 per cent added risk, and fifty pounds one of 56 per cent. The excess mortality in corpulent persons is due chiefly to organic heart disease, hypertension, apoplexy and diabetes. Furthermore, the obese are unable to withstand surgical procedures, childbirth or acute infections such as pneumonia, as well as persons of the same age and normal weight.

A few years ago Newburgh and Conn demonstrated that many obese individuals of middle age or older who have been thought to have diabetes mellitus, will no longer have a glycosuria when their weight has been reduced to normal by an anti-obesity diet. Furthermore, they will not thereafter have sugar in the urine, regardless of the diet consumed, provided they do not gain weight. That they have a glycosuria associated with obesity, rather than true diabetes, is demonstrated by the fact that their ability to burn sugar is unimpaired. Such persons when obese, however, have a glucose tolerance curve which is characteristic of diabetes and often a marked glycosuria. They do not develop acidosis nor are the classical symptoms of diabetes usually present, such as polydypsia, polyuria and weight loss. Frequently such patients have been subjected to rigorous dietary control methods for a number of years, and in many instances they have been put to the annoyance of taking insulin, all of which is unnecessary if the proper measures have been employed to control the obesity. The cause of the glycosuria of obesity is not known definitely. One possible explanation of the condition is that the liver in obese persons is so infiltrated with fat that it does not function properly to convert the blood sugar to glycogen and vice versa. Consequently, the blood sugar will reach a level which is above normal, and glycosuria will appear. It is recognized, of course, that not all obese persons have sugar in the urine but this may be because the carbohydrate function of the liver is not significantly disturbed until adiposity has been present for a considerable period of time.

Furthermore, obesity is a definite handicap as it produces symptoms which are directly due to the abnormal accumulation of fat itself. They are: increased warmth, dyspnoea, palpitation, foot strain, backache, ease of fatigue, and degenerative arthritis of the weight-bearing joints. It must be admitted that the arguments are all against the obese state; the only one in favor of it is the self-gratification which follows the over-indulgence in food.

The Cause of Obesity

It is amazing how many theories have been evolved to explain the cause of obesity, when the simple truth is that it results from the *consumption of an excess amount of energy in the form of food.* It is possible that heredity may play a role, but perhaps only in that it provides a person with a mental make-up which seeks the appeasement of an excessive appetite, or possibly obese persons acquire improper food habits from their parents who are also over-weight. *There is no convincing scientific proof that endocrine disturbances play an important role in the causation of obesity,* although this has long been the belief of many physicians. If this were true, one would expect that all patients with myxedema would be corpulent, as this endocrine disturbance characteristically has a very low basal metabolic rate; but they are not. The only method by which an endocrine disturbance could cause obesity is by increasing the appetite. Even if one adheres to the theory of the importance of the endocrine glands in relation to obesity in some patients, there are convincing data to indicate that satisfactory weight reduction in them can be accomplished by dietary measures alone.

There are two main reasons why so many theories have been evolved to explain obesity. The first is that many corpulent individuals insist that their appetites are not unduly large; and the second is that a person may have a caloric intake as low as 300 calories daily and fail to lose weight for a period of ten days to two weeks.

Obesity, in persons who insist that their food intake is small, can be explained by the fact that they ingest an excessive amount of concentrated food which has no residue, such as sugar, cream, butter, potatoes and bread. Furthermore, their diet contains an undue amount of fatty foods which have twice the caloric value of carbohydrate and protein. Finally, even such a small excess as *two hundred calories daily* over the actual needs of the body will result in a gain of approximately *nineteen pounds* in body weight *in one year.* Food yielding 200 calories is a relatively small proportion of the average twenty-four hour intake, and the average person cannot detect that this is being taken in excess, by either the eye or the appetite. It is, for example, the number of calories represented by a glass of milk, 2 tablespoonsful of butter, 3 slices of bread, a pint of beer, or 2 cocktails.

If a man consumed regularly each day, therefore, 200 calories more than his requirements, there would be a gain of approximately nineteen pounds in body weight in a year. At this rate of increase, if his weight at the age of twenty years was 110 pounds, at twenty-five years

it would be 205 pounds, at thirty years 300 pounds, and at thirty-five years 395 pounds. He would, therefore, be obviously corpulent at the age of thirty-five years and yet could say honestly that since the age of twenty years his appetite had not appeared to be abnormally large.

The failure to lose body weight for a short interval while consuming an exceedingly low caloric intake is a situation which presents no mysteries and does not require the assumption that some vague metabolic disturbance is active. It has been proven definitely by Newburgh and his associates* that such a paradoxical course of events results from a retention of water in the tissues. When a low diet is given, therefore, the patient will actually lose "flesh" but this is masked by the retention of water. This excess of tissue fluid is ordinarily not retained more than ten to fourteen days, but there is a possibility that it may be held somewhat longer. Eventually, if the low caloric intake is maintained, the fluid will be released suddenly and an immediate, and often a very large loss of weight, will occur within a few days. The possibility of retention of water is of practical importance, and patients should be warned that a temporary failure to lose weight may be due to this reason.

Treatment of Obesity

The treatment of obesity consists in prescribing a diet which is complete in every respect except for its caloric intake. For a number of years, a 1300 calorie anti-obesity diet, containing protein 65 gm., fat 60 gm., and carbohydrate 130 gm., has been used at the University of Michigan Hospital. Never has it failed to cause an obese person to lose weight, nor has any type of food deficiency been observed following its prolonged use. This diet contains approximately 1.0 gm. of protein per kilo of ideal weight for the average person; an adequate amount of calcium and phosphorus is present; there is the proper ratio between carbohydrate and fat, which prevents the development of an acidosis; and it provides all of the essential vitamins.

From my own experience I favor the use of a 1300 calorie diet. With such a food intake, one who is leading a life of normal activity will lose on the average at least 2 to 3 pounds of body weight a week. Furthermore, such a diet is a safe one, as it contains a sufficient quantity of carbohydrate to prevent an acidosis. In addition, it is a comfortable diet for the individual to consume and hence the subject is more likely to adhere to it. On the other hand, Dr. L. H. Newburgh, who has had a long experience in the treatment of obesity and has contributed so many fundamental facts which have a bearing on our understanding of the subject, has the opposite opinion. He believes that the slow loss of weight which accompanies the more liberal food intake is so discouraging that the patients often give up the diet after a few months. He recommends, therefore, that the calories be limited sharply, and hence prescribes a diet of only 450 calories a day. Patients who receive such a diet are instructed to restrict their activity sharply and are urged to enter the hospital for a preliminary period. When such a diet is given, the patient may develop an acidosis from the consumption of his own fat, especially if indulging in more than average physical activity. In such instances an additional 25 to 50 grams of carbohydrate should be added in order to overcome this. If a physician desires to use this diet I have no objection, provided the patients remain under observation. My own personal recommendation is, however, that reduction be accomplished by means of the 1300 calorie diet, especially if the patient is only moderately obese. The plan of such a 450 calorie diet with the means of adding 25 to 50 grams of carbohydrate is found at the end of this article.

The Amount of Body Weight to Lose Weekly

The amount of weight which is lost weekly when a 1300 calorie diet is given daily, of course depends upon the extent of activity of the person receiving it. In general there is a loss of between two and four pounds a week, which is not an undesirable amount provided the patient is in good physical condition, other than having simple obesity. Nor is there any limit to how much weight can be lost in order to reduce to an ideal body weight. Dr. L. H. Newburgh, by giving a 300 calorie diet for the first year and 600 calories the second year, reduced a patient from a body weight of 560 pounds to 192 pounds. During this interval of 24 months, the average weekly loss was 3.8 pounds. No form of treatment was given except an anti-obesity diet.

Exercise is Unnecessary

It is not necessary to advise exercise for patients to lose weight. Satisfactory results may be attained even while the patient remains continuously at complete rest in bed, provided the proper diet is advised. In many instances, too much physical exercise is detrimental for corpulent persons who are middle-aged or older. Moreover, it is exceedingly difficult to "work off fat," for in the first place it has the disadvantage of stimulating the appetite, and, secondly, from the standpoint of results accomplished, it is hardly worth while. For example, the amount of energy contained in a pat of butter, weighing 10 grams, is sufficient to supply the energy needs required to climb the 525 feet of the Washington monument. A football player during a strenuous game may lose as much as fourteen pounds, but only one-third of a pound is actual flesh and the remainder is water loss which is regained as body weight within a few hours when an adequate amount of fluid is ingested.

Weight Reduction is Most Satisfactorily Accomplished by Dietary Means Alone

Weight reduction should be accomplished by dietary means alone, and it never fails to achieve the desired results. Some physicians advise the use of desiccated thyroid gland for the purpose of overcoming the decrease in the basal metabolic rate which almost always accompanies loss of weight. This is unnecessary for if it is desirable for the patient to lose weight more rapidly, this can be accomplished by a further curtailment of the diet. Moreover, desiccated thyroid gland may, in some patients, cause unpleasant symptoms such as dyspnoea and palpitation. Every physician now knows that dinitrophenol is contraindicated in the treatment of obesity on account of its serious untoward effects. Nor is it necessary to give added vitamins, calcium or phosphorus salts or any other medication, if a properly balanced anti-obesity diet is used. It should be impressed upon a patient who desires to reduce that there will never be an "easy" method of reduction, if by that term is meant

* The statements regarding water balance and many other conclusions in this article are based upon the work of Dr. L. H. Newburgh, Professor of Clinical Investigation at the University of Michigan, and his associates. The author gratefully acknowledges the source of this information.

some method whereby the patient can "eat everything" and yet lose weight. The treatment of obesity can be condensed in the simple statement that it consists in the careful, intelligent, curtailment of the food intake.

Obesity and Pregnancy

In recent years it has been appreciated that the obese state in women during pregnancy is a menace as so many more complications incident to the gravid state occur under these circumstances. In general a woman should not gain more than 15 to 20 pounds during pregnancy. If it is necessary to reduce body weight or prevent further gain, the regular 1300 calorie diet should be given, to which is added one pint of skimmed milk. This will provide about 85 grams of protein and additional calcium and phosphorus. The pregnant woman must be maintained in nitrogen balance in order to build fetal tissues, and to assist in milk storage. In addition such an intake of protein is necessary in order to avert the development of a macrocytic anemia.

The Psychic Aspect of Obesity

It is not difficult to induce the average person to reduce the body weight by dietary means alone and to maintain it there for a period of several months. It is a different matter, however, to prevent patients from reverting to their former improper eating habits and reaccumulating weight again to the point where they are once more obese. In my opinion, most persons attain this state because they consume each day an amount only slightly greater than their needs. The important point is that they do this *every day* for weeks and months or years and consequently become conspicuously obese. In all corpulent persons, however, the psychic side should be investigated to ascertain if some emotional factor is active. Recently Freedman (*J.A.M.A.* 133:369, 1947) has emphasized that some persons eat more when they are nervous or worried or bored. It is certainly true that some of my obese patients live at an infantile level; they have few gratifying emotional experiences, and tend to substitute food for love and affection. Superficially such patients are often gay and entertaining. Many seem to enjoy playing the clown, but deep in their hearts they resent their lack of something which they have lost. It is this that they subconsciously try to replace with food. One of my patients lost weight periodically but was finally sent to me because there was no weight loss despite efforts of her physician to prevent obesity. A careful study of the emotional factors in her case revealed that she resented deeply the marriage to her husband of twenty years because she had assented to it only on the insistence of her father, as she had intensely desired to marry another with whom she was really in love. The only way she could free herself, at least temporarily, from her husband and the resentment of the union, was to gain weight. This was the thing in life which her husband detested most of all.

CLASSIFICATION OF FRUITS AND VEGETABLES

(According to Carbohydrate Content)

5% Vegetables
24 Cal. %

Asparagus
Bean sprouts
Broccoli
Cabbage
Cauliflower
Celery
Chard
Chinese cabbage
Cucumber
Egg plant
Endive
Greens, beet
Greens, mustard
Kohlrabi
Lettuce
Okra
Peppers
Pumpkin
Radish
Spinach
String beans
Summer squash
Tomatoes
Watercress
Turnips

5% Fruits

Honeydew melon
Lemon juice
Muskmelon
Rhubarb
Strawberries
Watermelon

10% Vegetables
44 Cal. %

Beets
Brussel sprouts
Carrots
Dandelion greens
Leeks
Olives, green
Onions
Rutabagas
Winter squash

10% Fruits

Blackberries
Cranberries
Currants
Gooseberries
Grapefruit
Lime juice
Oranges
Orange juice
Peaches
Tangerines

15% Vegetables
64 Cal. %

Artichokes, globe
Oyster plant
Parsnips
Peas

15% Fruits

Apples
Apricots
Blueberries
Cherries, sour
Grapes
Huckleberries
Loganberries
Mulberries
Pears
Pineapple
Plums
Raspberries

20% Vegetables
84 Cal. %

Beans, cooked
Lima
Kidney
Navy
Corn
Horseradish
Potatoes

20% Fruits

Bananas
Cherries, sweet
Figs, fresh
Grape juice
Prunes, fresh

5% veg. = 1 cup 10% veg. = ½ cup 15% veg. = ⅓ cup 20% veg. = ¼ cup

REDUCTION DIET—1300 CALORIES

(Protein 65 gm.; Fat 60 gm.; Carbohydrate 130 gm.: Calories 1300)

SAMPLE MEALS

Breakfast

5 or 10% fruit	½ cantaloupe
Bread (toasted or plain)	2 slices whole wheat toast
Butter	1 teaspoon of butter
Beverage	Coffee with top milk, saccharine if desired

Luncheon or Supper

Eggs or	2 poached eggs or
Lean meat, fish or	
Cottage cheese	1 serving
5% vegetables, raw or cooked	½ cup of greens with lemon juice
10% fruit or vegetable	½ cup of beets
Bread	1 slice of bread
Butter	1 teaspoon of butter
Beverage	1 glass of milk

Dinner

Lean meat or fish	1 serving of steak (3 ounces)
Salad of 5% vegetables	Combination salad, one serving (lettuce, tomatoes, cucumbers)
5% hot vegetable	½ cup of string beans
10% fruit	1 slice peach with top milk
Bread	1 slice whole wheat bread
Butter	1 teaspoon of butter
Beverage	1 cup

Milk: 1 pint of whole milk is used daily. If cream is desired for coffee or fruit, pour off the top of the milk.

Substitutes for the pint of whole milk:

a. 1 quart of skimmed milk (milk which has gone through the separator).
b. 1 pint of "cultured" buttermilk (if made from whole milk).
c. 1 quart of churned buttermilk.
d. ½ tall can of evaporated milk.

Beverages: Clear tea, coffee or bouillon may be used as desired.

Bread: White, whole wheat or rye. Whole wheat, graham or rye bread are preferable because they contain vitamin B and iron.

Salad dressing:

1. Vinegar and condiments.
2. Mayonnaise or French dressing made with mineral oil.

Meat, eggs or fish may be prepared by any method except frying. The visible fat should be trimmed from the meat when it is ready to be served.

Saccharine is used as a substitute for sugar.

REDUCTION DIET—450 CALORIES

(Protein 60 gm., Fat 10 gm., Carbohydrate 32 gm.: Calories 450)

PLAN

Breakfast

Fruit	100 gm. (½ cup)
Skimmed milk	200 gm. (1 glass)
Beverage	

Lunch

Lean meat	75 gm. cooked wt. (½ size of palm of hand)
Vegetable, 5%	75 gm. (⅓ cup)
Skimmed milk	100 gm.
Beverage	

Dinner

Lean meat	75 gm. cooked wt.
Vegetable, 5%	75 gm. (⅓ cup)
Skimmed milk	100 gm.
Beverage	

SAMPLE MENU

Breakfast

Strawberries	100 gm.
Skimmed milk	200 gm.
Coffee	ad lib

Lunch

Broiled lean beef	75 gm.
Cucumber and celery salad	75 gm. (1 cup)
Mineral oil dressing	ad lib
Cooked cabbage	75 gm. (⅓ cup)
Skimmed milk	100 gm.
Tea	ad lib

Dinner

Bouillon	ad lib
Roast chicken	75 gm. (small service, as first joint)
Lettuce	75 gm. (¼ head)
Mineral oil dressing	ad lib
Spinach	75 gm. (⅓ cup)
Skimmed milk	100 gm.
Coffee	ad lib

TABLES OF IDEAL WEIGHTS BASED ON THE WEIGHT AT 30 YEARS

MEN

Height	*Weight*	*Height*	*Weight*
5 ft.	126 lbs.	5 ft. 9 in.	156 lbs.
5 ft. 1 in.	128 lbs.	5 ft. 10 in.	161 lbs.
5 ft. 2 in.	130 lbs.	5 ft. 11 in.	166 lbs.
5 ft. 3 in.	133 lbs.	6 ft.	172 lbs.
5 ft. 4 in.	136 lbs.	6 ft. 1 in.	178 lbs.
5 ft. 5 in.	140 lbs.	6 ft. 2 in.	184 lbs.
5 ft. 6 in.	144 lbs.	6 ft. 3 in.	190 lbs.
5 ft. 7 in.	148 lbs.	6 ft. 5 in.	201 lbs.
5 ft. 8 in.	152 lbs.		

WOMEN

Height	*Weight*	*Height*	*Weight*
4 ft. 8 in.	112 lbs.	5 ft. 5 in.	134 lbs.
4 ft. 9 in.	114 lbs.	5 ft. 6 in.	138 lbs.
4 ft. 10 in.	116 lbs.	5 ft. 7 in.	142 lbs.
4 ft. 11 in.	118 lbs.	5 ft. 8 in.	146 lbs.
5 ft.	120 lbs.	5 ft. 9 in.	150 lbs.
5 ft. 1 in.	122 lbs.	5 ft. 10 in.	154 lbs.
5 ft. 2 in.	124 lbs.	5 ft. 11 in.	157 lbs.
5 ft. 3 in.	127 lbs.	6 ft.	161 lbs.
5 ft. 4 in.	131 lbs.		

COUNTY SOCIETY REPORTS

HONOLULU COUNTY MEDICAL SOCIETY

A regular monthly meeting of the society was held November 5, 1947. Only 32 persons attended, though members of the Hawaii Territorial Dental Association had been invited.

The final copy of the proposed revision of the Constitution and By-laws was read in full by the Corresponding Secretary.

It was announced by the President, Dr. Hill, that Dr. Koon Sun Fong had been elected to regular membership in the Society, and Capt. Robert W. Goltz, M.C., U.S.A., to service membership.

The following recommendations of the Committee on Forms of Medical Practice, approved by the Board of Governors, were called to the attention of the members:

(a) The Committee strongly deplores the competitive private practice of medicine or surgery by any physician or group of physicians in any county other than the one of which he or they are residents without their first securing the approval of the medical society in that country. It is customary—and in Hawaii the geographical situation and other factors make it particularly desirable—for doctors to limit their private practice largely to the county in which they are members of the local medical society, except of course for consultation work. The Committee feels that infractions of this principle are likely to lead to bad feeling between or among the county medical societies.

(b) The Committee strongly deplores any use of radio to announce the opening or the resumption of medical practice.

A guest speaker, Dr. Emil F. Tholen, Professor of Oral Surgery at the University of Southern California, spoke on Salivary Gland and Duct Calculi. The lecture was illustrated with numerous lantern slides, and was followed by considerable discussion. Refreshments were served on the lanai at the end of the meeting.

* * *

A special meeting of the Society was called on December 5, 1947, for the purpose of discussing the public relations program of the Territorial Association. The following members were present:

Arnold, Jr.	Gotshalk	Lichter	Richert
Bachman	Hartwell	Lynam	Shinkawa, T.
Bailey	Hata, H.	Majoska	Stevens
Batten, G. H.	Hata, T.	Marks	Strode
Bell, J.	Hill	Mermod	Stewart
Beck	Inouye	Millard	Tilden
Berk	Irwin, F.	Milnor, G.	Trexler
Childs	Izumi	Moffat	Wall
Cooper	Jacobson	Morong	West
Devereux	Kong	Murray	Withington
Doolittle	Lam, J.	Phillips	Wong, Robert
Faus, R. B.	Lee, R. K. C.	Pinkerton, F. J.	Yoshina
Gordon	Li, B.	Price	Young

Guests present were Drs. F. K. Chu, Walter Quisenberry, L. L. Sexton, John Lynn, and Mr. W. M. Jackson, Mr. Carl Flath, Mr. Chester V. Kiltz, Mrs. Price, and Mr. Allen Thompson, Vice-President and Actuary of the Associated Hospital Service Plans of New York, and Vice-President of the Associated Medical Service Plans of New York.

The background, and activities to date, of the Medical Economics and Public Relations Committee of the Hawaii Territorial Medical Association were reviewed and discussed at length by Dr. Hill and by the members of the Committee: Drs. Pinkerton (Chairman), Phillips, Izumi, and Faus. Mr. Allen Thompson then read a report of his observations, criticisms and recommendations regarding the Hawaii Medical Service Association. The highlights of these were as follows: that the Association should stop emphasizing office and home care insurance on the ground that it usually covered sums too small to have either social or insurable value, and emphasize hospitalization insurance instead, selling it to large groups when possible and to individuals when necessary; that the graduated fee and premium schedule be abandoned in favor of a single fee lower than the present "C" schedule fee for each service; that the public be given greater representation on the Association's Board; that the name be changed to suit the change in emphasis on the service offered; that the present upper limit on the income of eligible participants be removed, providing instead that single persons earning over $1,800 or heads of families earning over $2,500 may be asked by the physician to pay more than the scheduled fees; and that the Association withhold perhaps one-third of the physicians' fees in order to create a reserve fund. The members present voted to approve in principle, and recommend for adoption by the H.M.S.A., all of Mr. Thompson's suggestions.

After a prolonged discussion of the Medical Economics Committee's activities, with many specifically critical comments upon certain features of them, it was moved and seconded that the Committee be asked to circularize the membership of the entire Association with a questionnaire inviting full expression of opinion on each of the Committee's activities, with suggestions for modification of them or additions to them. The motion was passed by a vote of 26 to 7. The meeting was adjourned at 11:20 p.m.

* * *

Post-graduate lectures by Dr. Sterling Bunnell, President of the American Society for Surgery of the Hand, were attended by a large audience, composed chiefly of members of the Society, on the evenings of December 9, 10, and 11, in the auditorium of the Mabel Smyth Memorial Building.

* * *

The regular monthly meeting of the Society was held December 12, 1947; it was attended by 50 members and Mr. Dudley C. Lewis, attorney, was present by invitation. A movie entitled Pediatric Anesthesia was shown through the courtesy of E. R. Squibb.

A letter from the City and County Treasurer was read, urging physicians to communicate with him in the event of failure of City and County employees to pay medical bills within a reasonable period of time. A letter was read from Mr. Neal Ifversen, announcing that Dr. Fred Irwin had been changed from a part-time to a full-time basis with the H.M.S.A., at an appropriate increase in salary.

The revised version of the Constitution and By-Laws which had been read at a previous meeting and mailed to all members, was brought up for discussion. A detailed copy of the discussion may be found in the

Society's minutes. The proposed version was subjected to several modifications, deletions, and additions, and was finally accepted by almost unanimous vote.

The meeting was adjourned at a surprisingly early hour, and refreshments were served on the lanai afterward.

S. L. YEE, M.D.
Recording Secretary.

KAUAI COUNTY MEDICAL SOCIETY

A meeting was called to order by Dr. Toney at 7:00 p.m., November 12, 1947 at the Wilcox Memorial Hospital staff room. Those present were Doctors Boyden, Wade, Fujii, Wallis, Masunaga, Toney, and Cockett. Dr. Goodhue was present as guest.

A letter dated October 31, 1947, from the president of the Honlulu County Medical Society concerning the matter of the Kauai Eye Clinic was read to the members, and after some discussion, Dr. Boyden moved that the letter be filed and this matter closed.

A letter dated October 15, 1947, from Dr. C. M. Burgess was read to the members concerning the matter of the awarding of trophies in the last Territorial Medical Association golf tournament. The members moved that the secretary answer his letter concerning their decision which is that (1) The McKesson and Van Poole cups were to have the names of all three of the doctors —Burgess, Nishigaya, and Fujii—engraved on them and were to be kept in the office of the president of the Territorial Medical Association until the next annual golf tournament. The president's cup, which was to have been donated by Dr. Kuhns, was not available for discussion due to the absence of Dr. Kuhns. The gold cup donated by the Lihue Plantation Store is to be awarded to each of the above doctors. The Kauai County Medical Society members recommended that the secretary-treasurer purchase two cups similar to the one donated by the Lihue Plantation Store in order that each of the triple-tie winners may have a cup engraved with his name on it. The secretary was instructed to search for a copy of a letter written to the president of the Hawaii Territorial Medical Association (Dr. Robert E. Faus) and make another copy to be sent to both Doctors Faus and Burgess.

A letter from Dr. Hon Chong Chang was received and read concerning the matter of payment of dues while specializing in radiology on the mainland. The members voted that he be advised to pay $37.00 a year active membership dues commencing from the period of termination of active duty in the Medical Corps of the United States Army and up to date. He was exccused from all special assessments including the medical economics fee.

An editorial from the local Honolulu Advertiser was brought up by the secretary-treasurer concerning the matter of the appointment of someone else other than Mr. Eddie Chong to the position of registrar general of the Board of Health, Territory of Hawaii. The members voted that the secretary write a letter to Dr. Charles L. Wilbar, president of the Territorial Board of Health, for further information concerning this matter.

The matter of the Kauai County Medical Service Association was discussed, but no action taken in the matter. Dr. Wallis presented the highlights of his attendance to the Council of the Territorial Medical Association.

* * *

A meeting was called to order by Dr. Toney on December 10, 1947. Those present were Doctors Toney, Masunaga, Wade, Wallis, and Cockett. Mr. Kimball, president of the Board of Directors of the Hawaii Medical Service Association, Dr. Lynn, psychiatrist and neurologist for the Territorial Board of Health, Dr. Burns, resident at Wilcox Hospital, and Mr. Achor, manager of the Kauai Medical Service Association, were present.

Mr. Kimball discussed the H.M.S.A.

Benefits: He said that the benefits of the association would be extended to its members in order to prevent an accumulation of too large a surplus reserve of income. He also advocated extension of the hospital plan of the association throughout the islands. He discussed the Pineapple Plan which is to be started on the island of Kauai in the near future. He received a unanimous vote of the members in favor of consolidating Kauai Medical Service Association with the Honolulu office of the Hawaii Medical Service Association.

Dr. Lynn, Director of the Bureau of Mental Hygiene, Territorial Board of Health, discussed his position as full-time psychiatrist and neurologist. He spoke about his plan of extending his work to the island of Kauai twice a month in the near future. He intended to render treatment as well as consultation for diagnosis. He asked that the fees from private patients be donated to a local mental hygiene fund, which was to be administered by him through the Kauai Medical Society for the purchase of equipment, drugs, and other miscellaneous expenses. The members, by a unanimous vote, agreed that the secretary-treasurer of the Kauai County Medical Society keep account of this special mental hygiene fund.

Dr. Wallis brought up the subject of hospitalization on the island of Kauai from excerpts of a previous Board of Directors meeting of the Wilcox and Waimea hospital staffs concerning: (1) A central hospital in Lihue, Kauai; (2) Two hospitals on Kauai located in Waimea and Lihue; (3) Consolidation of doctors on the island of Kauai into medical groups with dispensaries located in each plantation town to be administered by the group physicians. No discussion or action taken on this matter by the members.

PATRICK M. COCKETT, M.D.
Secretary-Treasurer.

THE HONOLULU COUNTY MEDICAL LIBRARY

MRS. ETHEL HILL, *Librarian*

MISS JANE EISENHAUER, *Library Assistant*

PHONE 65370

8:00 a.m. to 4:30 p.m., and 7:30 p.m. to 9:30 p.m.
Monday through Friday

Closed Saturdays at noon and Sundays
Closed all day and evening on National holidays
and at noon on Territorial holidays

REGULATIONS

Loan privileges extended to all regular and honorary members of the Hawaii Territorial Medical Association, the Nurses' Association of the Territory of Hawaii, internes, residents, and doctors in the Territory who through no fault of their own are unable to become members of the Territorial Association.

Medical officers of the armed forces and Public Health Services stationed in Hawaii may be elected to membership upon payment of $5.00 per annum, with full library privileges.

Use of books and journals *in the library* is extended to the above and also to all military medical personnel, University students and authorized research workers.

Any professional person desiring restricted or temporary *loan* privileges may apply for guest membership by filling out an application form. This form must be signed by a sponsor who is the head of the applicant's organization, or in event of absence, the acting head. A nominal charge of $1.00 a year is made in order to help defray library costs and depreciation on books and journals, and a "Guest Membership" card is issued.

Physicians wishing to refer patients to the Medical Library may do so by giving the patient a note stating the particular reference to be used *in the library;* or loan privileges may be granted *on the doctor's name.*

RECENT ACQUISITIONS

Biography

Freud, Sigmund *Autobiography.* c1935. (From Bureau of Mental Hygiene.)

Runes, D. D., ed. *The selected writings of Benjamin Rush.* c1947. (Gift of publisher.)

Sachs, Hanns *Freud, master and friend.* c1944. (From Bureau of Mental Hygiene.)

Neurology and Psychiatry

Cobb, Stanley *Borderlands of psychiatry.* c1943. (From Bureau of Mental Hygiene.)

Cobb, Stanley *Foundations of neuropsychiatry.* 2nd ed. rev. c1941. (From Bureau of Mental Hygiene.)

Freud, Anna *Psychoanalysis for teachers and parents.* c1935. (From Bureau of Mental Hygiene.)

Freud, Sigmund *Beyond the pleasure principle.* n.d. (From Bureau of Mental Hygiene.)

Freud, Sigmund *Group psychology and the analysis of the ego.* n.d. (From Bureau of Mental Hygiene.)

Freud, Sigmund *Psychopathology of everyday life.* n.d. (From Bureau of Mental Hygiene.)

Freud, Sigmund *Wit and its relation to the unconscious.* c1916. (From Bureau of Mental Hygiene.)

Hartwell, S. W. *Practical psychiatry and mental hygiene.* c1947. (Gift of publisher.)

Hinsie, L. E. *Syllabus of psychiatry.* 1933. (From Bureau of Mental Hygiene.)

Strecker, E. A. *Fundamentals of psychiatry.* c1943. (From Bureau of Mental Hygiene.)

Wechsler, I. S. *A textbook of clinical neurology.* 6th ed. c1947. (Gift of publisher.)

Nursing

Bentley, J. E. *General psychology.* c1947. (Gift of publisher.)

Deming, Dorothy *The practical nurse.* c1947. (From Nurses' Association.)

Gill, E. S. *Laboratory manual of microbiology for nurses.* c1947. (Gift of publisher.)

Houghton, L. E. *Aids to tuberculosis nursing.* 2nd ed. 1946. (From Tuberculosis Association.)

Morse, E. C. *College chemistry in nursing education.* c1947. (Gift of publisher.)

Pharmacology and Therapeutics

Bastedo, W. A. *Pharmacology, therapeutics and prescription writing.* 5th ed. c1947. (Gift of publisher.)

Eggleston, Cary *Essentials of prescription writing.* 8th ed. c1947. (Gift of publisher.)

Sex Education

Baker, J. N. *Sex education in high schools.* c1942. (From Bureau of Mental Hygiene.)

Deutsch, Helene *The psychology of women.* 2v. c1944-45. (From Bureau of Mental Hygiene.)

Doshay, L. J. *The boy sex offender and his later career.* c1943. (From Bureau of Mental Hygiene.)

Ellis, Havelock *Studies in the psychology of sex.* v. 1, 2, 3, 5. c1906-13. (From Bureau of Mental Hygiene.)

Forel, August *The sexual question.* 2nd ed. n.d. (From Bureau of Mental Hygiene.)

Henry, G. W. *Sex variants.* 2v. c1941. (From Bureau of Mental Hygiene.)

Kahn, Fritz *Our sex life.* 2nd ed. rev. c1942. (From Bureau of Mental Hygiene.)

Lindsey, B. B. *The companionate marriage.* c1929. (From Bureau of Mental Hygiene.)

Meisel-Hess, Grete *The sexual crisis.* 2nd ed. c1917. (From Bureau of Mental Hygiene.)

Strain, F. B. *New patterns in sex teaching.* c1934. (From Bureau of Mental Hygiene.)
Strain, F. B. *Sex guidance in family life education.* c1942. (From Bureau of Mental Hygiene.)
Swift, E. H. *Step by step in sex education.* c1938. (From Bureau of Mental Hygiene.)
Van de Velde, Th. H. *Sex hostility in marriage.* c1928. (From Bureau of Mental Hygiene.)
Weininger, Otto *Sex and character.* 6th ed. n.d. (From Bureau of Mental Hygiene.)
Westermarck, Edward *The history of human marriage.* 3v. 1921. (From Bureau of Mental Hygiene.)
Wolbarst, A. L. *Generations of Adam.* c1930. (Gift of Dr. N. M. Benyas.)

Tuberculosis

Kraetzer, A. F. *Procedure in examination of the lungs.* 3rd ed. rev. c1947. (From Tuberculosis Association.)
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The Library wishes to acknowledege the gift of a group of nurses known as the "Old Guard" in memory of Dr. Judd. Their ten-year subscription to the *Archives of Surgery* and *Surgical Clinics of North America* will be not only a valuable contribution to our collection but also a most fitting and permanent monument in the name of this great surgeon.

BOOK REVIEWS

Gifford's Textbook of Ophthalmology. By Francis H. Adler, M.D. 4th ed. 512 pp. with 310 illus. Price $6. Philadelphia and London. W. B. Saunders Company, 1947.

This book is ideal for the medical student and the physician not specializing in ophthalmology. The usual texts give too much specialized knowledge which would never be used by the general physician and too little to enable him to treat adequately those patients who regularly come to him before seeing a specialist. The author has given special attention to the elimination of many of the technical aspects of ophthalmology in favor of a concise, specific, yet comprehensive coverage of the fundamentals of this specialty. The text and references have been brought up to date. There is satisfactory emphasis on physiology of the eye. Stress is given to ocular changes in medical and neurological disorders and detailed medical and other non-operative treatments are presented.

The book is characterized by its simple and clear language and the reader should be able to recognize many of the common ocular disorders that come to the attention of the general practitioner. Of value also, to many oculists whose knowledge of neurology is casual and scanty, there are several excellent sections on neuro-ophthalmology.

This book can be considered an authoritative elementary text on ophthalmology of considerable value to medical students and the general practitioner.

ROBERT T. WONG, M.D.

* * *

Laboratory Manual of Microbiology for Nurses. By Elizabeth S. Gill, B.S., R.N., and James T. Culbertson, Ph.D. Price $1.50. G. P. Putnam's Sons, New York, 1947.

This manual has been prepared particularly for student nurses with an emphasis on the handling and recognition of pathogenic organisms which is usually lacking in most of the elementary microbiology courses.

The material for the experiments has been chosen for its applicability to nursing. The exercises are arranged to give the student an understanding of the growth, transfer and destruction of non-pathogenic and pathogenic organisms as well as the "parasites" or protozoans, helminths and arthropods.

Each experiment gives a brief description of the subject to be studied, a list of the material necessary, special instructions for the experiment and questions to be answered by the student. Adequate space has been provided for answering these questions and for sketches of microscopic observations.

The pages of this loose leaf manual are easy to remove and replace, thus making it possible for the instructor to review the student's work without depriving the student of her manual.

MIRIAM L. KELLER, R.N.

New and Non-Official Remedies. By Council on Pharmacy and Chemistry of the American Medical Association. 1947 ed. Pp. 749. J. B. Lippincott, Philadelphia. 1947.

The 1947 edition of this book is entirely up to the high standards set by its predecessors, which is perhaps all that one needs to say about it. Quite a large list of the newer accepted remedies are included, as for example, digoxin, streptomycin, thiouracil, benadryl, demerol, etc. As is usually the case, quite a number of items are omitted because they have, since the last edition, been made official pharmacopoeial preparations.

There is one feature of the book which deserves the very highest praise and which is lacking in other books of this sort, as far as I have been able to see. When a proprietary substance becomes popular under the proprietary name, as has so often been the case, and it is finally put on the market under its chemical or non-proprietary name, it is often difficult for the practitioner to find the substance unless the proprietary name, with which he was previously familiar, is included in the index. In this book, such proprietary names are continued: for example, Mecholyl, which is now marketed under the non-proprietary name of methacholine, may be found under both names in the index.

Every physician and every pharmacist needs this book on his shelf.

H. L. ARNOLD, M.D.

* * *

Internal Medicine in General Practice. By Robert Pratt McCombs, B.S., M.D., F.A.C.P. 2nd ed, illus. 741 pp. Price $8. W. B. Saunders Company, Philadelphia, 1947.

This book generally discusses medical conditions, diagnosis, treatment, etiology, and the various factors influencing the treatment of various diseases. The discussions are concise and brief and in the main are informative and helpful, particularly to one who is reviewing numerous subjects in a rather hurried manner. The discussions are by no means complete from all standpoints, leaving out some details of differential diagnosis, etiology and treatment. However, for the space allotted, a fairly good job is done on each condition.

In reviewing this book, I have had the impression that this type of approach to diseases of internal medicine for the practitioner and student is not the one best suited to one who is reading for references on a subject, since the discussions here are not complete enough to give the reader all the information he may need. The very necessity of making the discussions brief destroys much of the value, particularly as to completeness. This type of book is practical for a hurried review of the field of medicine but it should not be used as a book in which to obtain complete knowledge of any one condition.

F. L. GILES, M.D.

A Textbook of Clinical Neurology—With An Introduction to the History of Neurology. By Israel S. Wechsler, M.D. 6th ed. 829 pp. with 162 illus. Price $8.50. Philadelphia, W. B. Saunders Company, 1947.

This excellent, concise, and complete textbook of clinical neurology is in its sixth edition since its first appearance twenty years ago. It has again been revised and brought abreast of the rapid progress in neurology, particularly in respect to the more favorable prognosis of many of the so-called incurable diseases, resulting from recent advances in the physiology of the nervous system, the newer methods of diagnosis, and the more favorable response to chemotherapy, surgery, and other forms of treatment.

A new approach in psychometric examination which the author has rewritten in collaboration with his brother, Dr. David Wechsler, Ph.D. in psychology, is well worth perusal. The chapter on neurosis should be of special interest to the general practitioner, who undoubtedly is daily confronted with problems of functional cases in his practice. The short summary, covering the various etiological factors, the biological background, and the psychoanalytic aspects, is well worth reviewing.

In view of the recent intensified interest in poliomyelitis, convulsive seizures, skull injuries, etc., I can not recommend a better or a more handy textbook than the present edition of Dr. Wechsler's.

The thirty odd pages of his Introduction to the History of Neurology is a timely contribution. He says "neurology in general is as old as medicine; as a specialty, it is as young as yesterday." From the great lore of medical literature on the history of medicine, he has succeeded in condensing and weaving a very interesting and fascinating story of the struggles of the early observers—a formidable list of investigators, all famous in medical history—properly evaluating their contributions, however insignificant they might have been; for the sum total of their efforts paved the way to our modern knowledge of neuro-anatomy, and clinical neurology; but in the fields of neurophysiology, biochemistry, and biophysics of the nervous system, we are "not even fledglings out of their shells."

M. F. CHUNG, M.D.

* * *

The Selected Writings of Benjamin Rush. Edited by Dagobert D. Runes. Pp. 433. Price $5. Philosophical Library, New York, 1947.

A brief prefatory biography and twenty-nine selected essays depict, in this book, a man who was intimately concerned with the formation of the United States of America; a signatory to the Declaration of Independence; a close friend of Thomas Paine; a leader among physicians of his day, as well as among statesmen; a scholar, humanist, naturalist, and practical sociologist. He was Professor of the Institutes and Practices of Medicine in the University of Pennsylvania, but his interests extended far beyond the responsibilities of medical teaching and practice.

His lucubrations were more pro- than anti-, in general; but he was bitterly and outspokenly opposed to war, slavery, "strong spirits" (he approved heartily of beer and wine), and ungodliness; he was also critical of the Roman Catholic Church, the death penalty for murderers, caning or "feruling" schoolboys, and the refusal of some physicians to embrace blood-letting as a therapeutic measure.

He strongly urged the formation of a Secretariat of Peace in the Federal government, in addition to the Secretariat of War. He recommended golf, a form of light exercise "much used . . . in Scotland. A large common in which there are several little holes is chosen for the purpose. It is played with little leather balls stuffed with feathers; and sticks made somewhat in the form of a bandy-wicker." He approved the use of cosmetics by women.

Benjamin Rush was a highly intelligent, thoughtful, moral, vigorous and outspoken physician and citizen. These selections from his writings go down with ease and whet the appetite for more.

HARRY L. ARNOLD, JR., M.D.

* * *

Essentials of Prescription Writing. By Cary Eggleston, M.D. 8th ed. 155 pp. Price $2. W. B. Saunders Company, Philadelphia, 1947.

Simplicity seems to be the keynote of this book. Simplicity in the manner in which it is written, and urging simplicity in the practice of the written prescription.

While two chapters are devoted to the proper use of Latin in the prescription, the remainder of the book deals almost exclusively with the prescription in English, based on the thirteenth revision of the *United States Pharmacopoeia* and also the *National Formulary* and *New and Nonofficial Remedies.*

It is felt that the busy modern practioner will benefit by his suggestions and to quote the author, "If physicians would only make greater use of the *Pharmacopoeia,* the *National Formulary* and *New and Nonofficial Remedies* they would find their labors greatly lightened."

This handbook truly would seem to merit an hour's attention.

CLINTON D. SUMMERS, R.Ph.

* * *

Endogeneous [sic] *Endocrinotherapy Including the Causal Cure of Cancer: Compendium.* By Dr. Jules Samuels. Pp. 539, 30 illus. Price not given. Holdert & Co., Amsterdam, 1947.

Dr. Samuels styles himself "specialist for endogeneous [endogenous?] endocrinotherapy," and the book contains just about the sort of statements that one would instinctively expect a "specialist for endogeneous endocrinotherapy" to make. For example: "hyperfunction of the thyreotropic center" is said to be the cause of Hodgkin's disease, pernicious anemia, gigantism and acromegaly, cachexia, and Buerger's disease.

A diagnostic method ("spectroreductometry"), an investigative technic (the "endocrinogram" and the "cyclogram"), and a therapeutic procedure ("endogeneous endocrinotherapy," by medical diathermy) are described in the book. The author has been employing these successfully, he says, for about twelve years. It seems odd that in this length of time so little publicity should have been given it, for the results are apparently downright miraculous.

The book can be recommended only to those interested in medical curiosa and nostrums.

HARRY L. ARNOLD, JR., M.D.

REMINISCENCES OF DECEMBER SEVENTH: III

REPORT TO A MEETING OF THE HAWAII COUNTY MEDICAL SOCIETY

I feel rather diffident in having occasioned this meeting; however, I have had certain opportunities, and it has appealed to me that, if I could pass along any benefits or knowledge that I had acquired, it was my duty to do so, particularly as Society affairs in part accounted for my being in Honolulu. We may think they won't hit here again. That attitude might be unfortunate, so I thought it better be now and not next month.

If I am unable to tell you anything today that will be of benefit it will not be from lack of opportunity, but rather inability to observe and deduce from my observations.

I will take up my connection with events while in Honolulu in a rather chronological manner. On the Sunday morning of the 7th of December there was a meeting at 9:00 o'clock at the Mabel Smyth Memorial Building to hear a lecture by Dr. Moorhead, that had been postponed from the previous day. Just before the lecture, while gathered outside the lecture room, Dr. Hodgins arrived from Pearl Harbor, very excited, telling of hearing bombing and seeing a cruiser lying on her side and burning at Pearl Harbor. His information was received in rather a disbelieving way, so much so that he proceeded himself to believe that what he was seeing was anti-aircraft practice, and we went in and sat down at the lecture. However, there seemed to be an uncertainty in the air from that time. Dr. Moorhead began his lecture by mentioning that he had served in France in the last war and that if the opportunity came he wanted to do his bit again in any capacity which he could. After a few minutes one or two individuals were called from the lecture, and then an announcement was made through the loud speaker that surgical teams and medical help were wanted at Tripler. We then, of course, realized that something was happening. I got in the car with Dr. Hodgins and we started toward Tripler, which is on the old road out of Honolulu toward Pearl Harbor. Traffic going out was already dense, consisting of the greater part of men from the various posts who were trying to return to duty.

After some delay owing to traffic, we reached the hospital and went up to the operating floor. Certain surgical teams, which had previously been arranged for under the civilian defense committee of the Medical Society, were arriving and ready to work. Dr. Moorhead and myself, having no previous connections, teamed up together and were assigned to a table. Already the wounded were covering the floors of the halls and every available space leading to the theatre.

My observations from now on will be largely the product of my association with Dr. Moorhead over the next two days, and it is on the authority of that association that I am talking today. When I mentioned to him that I expected to quote my experiences and hoped that I would not misinterpret his opinions, he was good enough to say that he was quite willing to take a chance on that.

I cannot posibly recall to you all the cases. I will just mention a few cases, which will bring out all the points that I want to make as I go along from here.

The first patient that came to us had a traumatic amputation of the hip. One leg had been shot off right through the hip joint leaving a stump of the femur about three or four inches long. This was this man's only wound. In this case about two inches of the femoral artery was lying exposed on the tissues just like a finger, and filled with clot. It seems hard to understand why he had not died from hemorrhage. However, there was firm clot in this exposed portion of the artery.

Right here I want to say in partial explanation that the type of surgery that was being done was the mass surgery of a tremendous emergency.

The first procedure in this, and in all cases, was to wash about the wound with soap and water, and then flush the wound itself with sterile water or salt solution, then ligation of the large vessels, debriding of devitalized tissues and skin, merely tacking the remaining flap to the wound with no attempt at covering. A note was given to the anesthetist of what had been done, and the patient was returned to the ward with an order for an immediate transfusion.

I want you to note that there was a history of what was done made at the end of this case, as well as in all subsequent cases.

The next case was a compound fracture of the tibia and fibula with a large portion of the calf torn away. And here is a point I want to make. On quickly sizing up this injury Dr. Moorhead said, "Amputation." There may have been a query in my expression, because it looked to me like a case which, under individual conditions, we might have treated conservatively. However, he quickly

said that with the amount of destruction of tissue, the condition of the bones, the splintering of the fragments, coupled with the fact that these cases when they go out from these emergencies are not under your observation, and that amputation in such a case was a life-saving procedure. Later he brought out the fact that an artificial leg in this type of case is of much more use than a mutilated and painful leg.

Now, there were a large number of amputations performed those days. While a man with the experience of traumatic surgery of Dr. Moorhead could make a quicker decision, it seems to me that an amputation for us should require a getting together for a moment of time, even though very brief, before coming to the decision to amputate, except in very clear cut cases.

This amputation was a chop, or guillotine amputation performed below the knee through the bones, not through the joint, even though higher amputation may be later required.

Right here I will bring in the use of the sulfonamide powders, sulfanilamide and sulfathiazole. In our first case, after debriding we packed and dusted the wound and filled its interstices with sulfanilamide powder. The same was done in each case. There was, perhaps, not an actual scarcity of this medication, but it was difficult to keep it at hand, and it came to the point where you were conserving it from each case and hiding it in a corner near your table. And here I want to say that there was a very great waste of these drugs. Perhaps in the excitement of the first day it was unavoidable, but the waste carried over not only the next day, but in subsequent days in dressings in the wards. In the attempt to shake these powders from pound bottles or from long test tubes you almost had to be wasteful. In this connection I believe that the sulfa powders should be provided in wide-mouthed bottles in various sizes so that you could pick out the one suitable to do the work that has to be done. The bottles should be wide-mouthed so that a dressing forceps handle or a tongue blade could be passed through and the powder taken out and put where it is supposed to go—to pack among the muscles, into the fascial spaces and into all the broken spaces in the tissues. This cannot be done with a shaker, but to get the powder into all the interstices of the wound it has to be carried there. I think some such solution would save three-fourths of the supply, and be more efficient.

The next case I am going to mention was a compound fracture of the femur, above the knee, in which the projectile had traversed the thigh transversely and was not in the tissues. The circulation was efficient in this case and the decision was to preserve this leg. The treatment then consisted of excising the wound or entry and the wound of exit completely, and then debriding all the devitalized tissues down to the bone. This was done in a very thorough manner, not sacrificing any tissues that were vital, but removing all tissues that were dark and which did not bleed when cut into. The Thomas splint was applied and a Kirschner wire was put through the malleolus for extension. After thorough treatment with the sulfa powder dressings were applied. In future cases instead of saying sulfanilamide or sulfathiazole I will just say "sulfa powder," because the word will be used often.

The next case I will tell you about was a gunshot wound of the abdomen. The bullet had entered the abdomen just above the anterior superior spine on the left, and there was no wound of exit. X-ray showed a projectile on the right side under the liver. The surgical treatment was as follows: The wound of entrance was excised and debrided. An incision was then made in the midline above the umbilicus. There was massive hemorrhage in the abdomen. After swabbing out the blood, the first examinations were made on the right up under the liver in the location of the foreign body in the X-ray. The bullet was found free in the peritoneal cavity. There was no evidence of hemorrhage from the liver or stomach, or transverse colon. Then, backing down toward the wound of entrance, we began to find perforations in the jejunum and ileum. In one section of the jejunum in a distance of about fifteen inches there were seven perforations. I will mention the size of the bullet removed. In appearance it was the size of a 30.30 bullet with cartridge. It came to a very sharp point, and it was not mutilated. It was said to be from a large size, I forget the calibre, machine gun such as are mounted on airplanes. The perforations were some through the mesenteric portion and some through the free bowel, and had gone through the bowel leaving wounds of entrance and exit. The remarkable thing was the way these wounds had closed down and contracted to a mere pinpoint. These perforations were closed by a double line of silk sutures Lemberting them in. These sutures were placed in the long axis of the bowel so as to minimize the encroachment on the lumen. Altogether about twenty-one perforations were found in this case and closed in the same manner. The whole bowel was looked over from ligament of Treitz to the ileo-cecal region. Sulfa powder was then dusted extensively within the peritoneal cavity and the incision closed. A

vaseline strip was placed in the wound of entrance down to the peritoneal cavity.

I may say right here that on Monday morning when we were starting to work after a few hours off, Dr. Moorhead said, "Now let's review a bit. What did we do yesterday that, if we had to do over again, we would do differently?" One or two things were mentioned, such as the treatment of shock, etc., and then I said, "Well now, wouldn't we resect that loop of intestine that had so many perforations in it, instead of suturing the individual perforations"? His answer was "No," that a resection adds tremendously to the shock and the future risk of these cases. I can see the point, although I think that in civilian practice with an injury of this kind that you had completely under your control for follow-up with Wangensteen, observation of any symptoms which might develop, such as ileus, resection would be good surgery, but in the circumstances under which we were working it was inadvisable. This brings out, too, the necessity for coordination between surgery and follow-up.

Next I want to bring up a chest injury. This man had a large wound in the chest around the axillary line about the region of the 4th or 5th rib on the right, and the projectile had traveled downward and may have been in the mediastinum, the lung, or in the diaphragm, somewhere in the lower part of the thoracic cacity. This was the type of wound described as "sucking," that is, air was passing in and out with each respiration, and with all the possibilities of disturbances of the mediastinum that take place under this condition. The treatment was as follows: The wound of entrance was debrided, at the same time maintaining a plug within the wound to prevent sucking. Then a tube 1 inch in diameter and long enough to reach to the floor was placed in the wound. It was fixed there by a succession of strips of adhesive tape around the tube in an elliptical way, one on top of the other, increasing in size until the wound was entirely shut off from the outside. The end of the tube was placed in a large bottle containing sterile fluid to cover the end. No attempt was made to explore the chest or to look for a foreign body, the object being to allow the lung to expand and prevent mediastinal shift. In these cases in massive hemorrhage within the pleural cavity, after closing the wound aspiration once, or repeatedly, may be necesary. I think that possibly something of added value in these cases would be, after having proceeded as above, to make a heavy suspension of the sulfa powder and inject it into the pleural cavity with a large needle through the tube. I believe that it might be of marked value in minimizing subsequent infection.

Another case I wish to speak of for special points was a wound in the sacral region. The projectile, a large shell fragment, had crashed in and amputated the lower end of the sacrum, as in a Kraske operation, and was imbedded in the tissues in front of it. This case was reached late in the first day. There was a history of his not having voided. A catheter was passed into the bladder and only a very small amount of urine was obtained, but there was no blood. The wound of entry was excised and opened up, the foreign body was located and removed, the wound was debrided and fragments of the sacrum were also removed. The question then arose whether the wound had penetrated sufficiently to injure the rectum and soil the peritoneal cavity anterior to it. It seemed to me unlikely, and I think that I would have done no more. However, Dr. Moorhead called for a new set of instruments, and opened this man suprapubically. Nothing was found within the peritoneal cavity. The peritoneum and the cul-de-sac about the rectum was ecchymotic. I mention that I might not have made this exploratory because possibly some of you might have taken the same attitude, and it is mentioned to stress the attitude of Dr. Moorhead in insisting on visualizing the peritoneal cavity in this case.

The next subject I am going to touch on is foreign bodies in the tissues, which were mostly shell fragments of various sizes. The procedure, of course, depended on the location and the tissues involved. If there were a large projectile in the tissues and the X-ray showed it, the procedure was to follow the wound down to the projectile, debriding all devitalized tissues down to it, and on reaching it the bed of the projectile was debrided. Unless the resulting wound was very shallow, particularly if the foreign body were nearer the surface elsewhere than at the entering site, a counter opening was made. The tract was well treated with sulfa powder, and then a vaseline strip was passed through it. This was not in any sense a pack, it would lie very loosely in the wound. In the first cases there was a little difficulty encountered in pushing the sulfa powder out as you pushed the vaseline strip in. So the method was devised of treating the vaseline strip on the surface with the sulfa powder so that it would carry it through with it.

No sutures were used to close the wounds. I may say that was an absolute rule. Occasionally sutures were placed and a bow knot tied in them

for subsequent tightening, but this was the exception rather than the rule.

I saw no burn cases at Tripler. The cases were practically all Army men from Hickam Field and vicinity. However, I understand that there were many burn cases at Pearl Harbor and they were taken to the Naval Hospital there.

Just from observations of the many abrasions and wounds, I formed an opinion as to the treatment of burns. It has no authority and little experience behind it. I believe that the procedure as far as the local condition is concerned would consist of thorough cleansing with soap and water, debriding of obviously devitalized tissues, drying, and the use of the sulfa powder thoroughly applied, over this a dressing of one thickness of vaseline gauze reinforced with plain gauze. This is based on seeing how quickly these wounds and abrasions treated thus became dry and ceased to secrete, with the prevention of infection.

* * * * *

To summarize: we have been discussing war surgery, and in these days civilians are almost equally involved. Your case today may be pushed along for the casualty of tomorrow, so you have no assurance of opportunity to follow up with advice or correct any omissions of today; therefore, complete and correct first treatment means saving of life and limb, and will greatly shorten the average hospitalization and disability.

To again briefly list the means:

(1) Treatment of general condition—shock, hemorrhage, et cetera.
(2) Investigation of wounds in all their possible extensions.
(3) Complete debriding.
(4) The efficient use of sulfa drugs, locally and by mouth.
(5) No suturing for closure.
(6) Vaseline gauze to keep wounds open, not for packs.
(7) Records to go definitely attached to the patient.

I can't close without mentioning the men who were "taking it." Most of them were lads in their twenties. Their attitude may be summed up in the words self-control and cooperation. They showed it in the quiet way they took an anesthetic, yes, and in the quiet way they came out of anesthetic. It greatly lightened the work, and without doubt improved their chances. They were admirable.

Dec. 20, 1941. S. R. BROWN, M.D.

NOTES AND NEWS

DR. TADAO HATA, of Honolulu, has been certified by the American Board of Otolaryngology, having successfully completed the examinations of the Board while on the mainland last fall. He attended the meeting of the American Academy of Otolaryngology and Opthalmology in Chicago. His brother, DR. HERBERT C. HATA, has joined him in the practice of otolaryngology. The latter, a graduate of the College of Medical Evangelists in 1940, was recently honorably discharged from the Army as a Major, after serving for thirty-nine months in the Asiatic Theatre. He took a refresher course in otolaryngology at the University of Minnesota just prior to resuming practice.

DR. THOMAS H. MAEDA has returned to Honolulu to practice general surgery, after having been away from the Islands for seven years. During this time he studied graduate surgery at the University of Pennsylvania for one year, following which he was surgical resident for two years at the American Oncologic Hospital in Philadelphia. He was later surgical resident at the Hazelton (Pa.) State Hospital and for the past year has been chief surgeon at the Shamokin State Hospital. He was admitted to Fellowship in the American College of Surgeons in 1946. Dr. Maeda is located at 1048 S. Beretania Street.

DR. HOMER BENSON, of Honolulu, has returned from an extended mainland trip which included the meeting of International Post-Graduate Medical Assembly in St. Louis and a course at Cook County Hospital in Chicago. He also visited at the Mayo Clinic, Rochester, Minnesota and at his home in Richland Center, Wisconsin.

DR. LEON E. MERMOD, director of the Honolulu Blood Bank, delivered a paper before the meeting of the National Blood Bank Institute in Dallas, Texas. Dr. Mermod was elected vice president of the American Association of Blood Banks.

DR. ERIC FENNEL, pathologist at The Clinic and at Kapiolani Hospital, delivered a paper at Tripler Hospital before a meeting of Army medical officers, on the subject of "Three Nonspecific Laboratory Tests as Applied to Diagnosis and Prognosis."

DR. RALPH B. CLOWARD, of Honolulu, addressed the Harvey Cushing Society at their annual meeting in Virginia on the subject of "The Treatment of Ruptured Lumbar Discs by Intervertebral Fusion." Dr. Cloward was successful in having this society of neurosurgeons vote to hold its next meeting in Honolulu in August, 1948, in conjunction with the Pan-Pacific Surgical Congress.

DR. WAYNE W. WONG has opened an office in the Victoria Medical Building, Honolulu, for the practice of ophthalmology and plastic surgery. Dr. Wong is a native of Maui and was graduated from Rush Medical College in 1940. He interned at the Cook County Hospital, Chicago, following which he was a resident in ophthalmology there for two and a half years. He has been certified by the American Board of Ophthalmology in 1946. He was associated with Dr. W. B. Slaughter, plastic and oral surgeon at Loyola University Medical School, Chicago.

DR. HARRY L. ARNOLD, JR., spoke to the Hawaiian Botanical Society on January 5 on plant dermatitis in Hawaii.

DR. CHARLES A. WILBAR, JR., president of the Territorial Board of Health, has returned from attendance at the meeting of the State and Territorial Health Officers' Association, in Washington, D. C. He visited the Massachusetts and California Health Departments to learn, in particular, matters relative to their excellent cancer control programs. He states that Hawaii needs a more active program in this disease and that it must be carried out with cooperation between the County Medical Societies, the lay American Cancer Society and the Board of Health. It is expected that considerable progress will be made in this activity this year.

Another matter which he said is of considerable interest is the availability of the Virus Diagnostic Laboratory of the California State Health Department, in Berkeley, to Hawaii physicians. The laboratory tests for virus diseases are necessarily complex and it will be some time before they can be carried out locally. However for cases in which it is necessary to obtain help from the laboratory, arrangements can be made through the local Board of Health for shipment by air to Berkeley of the material for testing.

DR. WALLACE S. KAWAOKA has opened an office in the Victoria Medical Building, Honolulu, for the practice of ophthalmology. He is a graduate of Tulane University Medical School in 1937 and took an internship in Iowa and a general residency in Lynchburg, Virginia and later Ponca City, Oklahoma. After general practice in Lihue, Kauai for three years, he volunteered for the 442nd Combat Team and served overseas with them for two years as a Captain in the Medical Corps. Following discharge he served as a resident in ophthalmology for eighteen months at the Tulane Eye, Ear, Nose and Throat Hospital and later took graduate work at the New York Eye and Ear Hospital. Dr. Kawaoka is a native of Eleele, Kauai.

DR. EDWIN YOUNG, until recently a resident at the St. Francis Hospital, has left to serve in the Army Medical Corps and has been assigned to San Antonio, Texas.

DR. ALFRED H. F. LUI has opened an office for the practice of medicine and surgery in Kailua. He served as a resident at the St. Francis Hospital following his discharge from the Army Medical Corps as a Captain. He had spent one year in Japan in the Occupation Army. Dr. Lui graduated from the College of Medical Evangelists in 1945 and interned at the White Memorial Hospital in Los Angeles.

DR. CORYDON MCA. WASSELL has resigned as superintendent of the Shingle Memorial Hospital at Hoolehua, Molokai and has returned to his home in Little Rock, Arkansas.

DR. JOHN G. LYNN has been appointed director of the Mental Health Clinic of The Queen's Hospital and of the Territorial Board of Health. He is a graduate of the University of Maryland School of Medicine, in 1929, and has been chief psychiatrist of the Psychiatric Institute of Grasslands Hospital, Valhalla, New York, for the past three years prior to coming to Hawaii. He has been assistant attending neurologist at the Vanderbilt Clinic, in New York City, as well as a research associate in neurology at Columbia University College of Physicians and Surgeons. During this time he was also instructor in neuro-anatomy in the Columbia University Graduate School.

Dr. Lynn is a diplomate of the American Board of Psychiatry and Neurology, having been certified in 1940. He is also a member of a number of national psychiatric and neurological societies and is the author of many scientific articles in his specialty.

The Kuakini Hospital has a new resident physician on its staff, DR. FUMIYO SUGIMOTO, a native of Wahiawa. She received her medical aducation at the Women's Medical College in Tokyo, from which she was graduated in 1940. She has spent six years in the Aiiki Research Institute of Pediatrics in Tokyo.

The Queen's Hospital has added two new residents to its house staff. DR. ELEANOR GREEN, of Brooklawn, New Jersey is serving a mixed medical residency. She was graduated from the University of Pennsylvania School of Medicine in 1945 and served for internship at the Philadelphia General Hospital for two years. DR. EMMETT NEIL, of Gillette, Wyoming, is serving as mixed surgical resident. He is a graduate of Georgetown University Medical School in 1944 and interned at the St. Vincent's Hospital in Los Angeles. Following this he was a Captain in the Army Medical Corps.

DR. MAXIMILIAN OBERMAYER, professor of dermatology in the University of Southern California Medical School, spent the last ten days of December at Hana and made a three-day visit to Kalaupapa in January. Dr. Obermayer is the junior author of Becker and Obermayer's "Modern Clinical Dermatology."

DR. DOROTHY NATSUI has joined the staff of the Bureau of Mental Hygiene of the Health Department as acting child psychiatrist. Dr. Natsui recently returned from Johns Hopkins University Medical School where she took a year's work in child psychiatry. Prior to that time, she was at the Territorial Hospital for five years as hospital physician. After attending the University of Hawaii for a year, Dr. Natsui received both her bachelor's degree and her M.D. degree from Loyola University.

ISLAND OF KAUAI

DR. AND MRS. DONALD CHISHOLM, of the Samuel Mahelona Hospital, where Dr. Chisholm is medical director, have returned from a six month leave of absence in Philadelphia, Pa.

DR. AND MRS. WILLIAM TONEY, of Kilauea, welcomed their second child, a girl, at the Wilcox Memorial Hospital, on October 30, 1947. She has been named Valerie.

DR. MARVIN BRENNECKE, of Waimea, has returned from an extensive automobile tour of various mainland medical centers for three months.

DR. AND MRS. JAY KUHNS, of Lihue, have returned from a vacation in Oregon, where Dr. Kuhns did lots of fishing and hunting in the backwoods.

DR. AND MRS. PATRICK COCKETT, of Lihue, have returned from the Plantation Physicians Convention on Hawaii.

ISLAND OF HAWAII

A Journal Club has been started at the Hilo Memorial Hospital under the direction of DR. M. GERUNDO. The club meets weekly on Tuesday evening and the meetings are open to all who wish to attend. Twelve physicians have volunteered to review current literature in their respective fields of medicine, each one to devote an evening to the presentation of significant articles.

A number of local physicians have taken mainland trips recently. They include DR. R. S. FILLMORE, of Kohala; DR. C. L. PHILLIPS, of Hilo; DR. ARCHIE ORENSTEIN, of Hilo; DR. C. B. BROWN, of Hilo and DR. E. S. SLATEN, of Pahala.

DR. H. D. IRELAND has resigned from the staff of Puumaile Hospital for Tuberculosis and has accepted a position in a new sanatorium in Seattle, Washington.

DR. C. HAYASHI, of Hilo, recently returned from a vacation in Chicago. While he was away his practice was taken over by his brother, DR. S. HAYASHI, of Cleveland, Ohio.

DR. R. M. MIYAMOTO has opened an office in Hilo for the practice of medicine and surgery. He is a graduate of Tulane University Medical School, in 1939, and interned and had a residency at St. Joseph Hospital, Joliet, Illinois. He served in the European Theatre as a Captain in the U. S. Army Medical Corps, and practiced in Joliet prior to his return to Hilo.

HONOLULU PEDIATRIC SOCIETY

This Society was organized in November and has drawn up a Constitution and By-Laws. It will meet every two months. Membership is divided into two groups, Active Members and Associate Members. Active Members are those who limit their practice to pediatrics, there being eight such members at this time. Associate Membership will be extended to those physicians interested in pediatrics who wish to attend the meetings.

The Society is under the presidenccy of DR. JOSEPH PALMA, of The Clinic, and DR. TERUO YOSHINA is the secretary. They have taken an old Hawaiian motto, "Hoola A Hoolu Lahui" originally credited to King Kalakaua.

MISSISSIPPI VALLEY MEDICAL SOCIETY 1948 ESSAY CONTEST

The Eighth Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1948. The Society will offer a cash prize of $100.00, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the

general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents of the United States. The winner will be invited to present his contribution before the Thirteenth Annual Meeting of the Mississippi Valley Medical Society to be held in Springfield, Ill., September 29, 30, October 1, 1948, the Society reserving the exclusive right to first publish the essay in its official publication—the *Mississippi Valley Medical Journal* (incorporating the *Radiological Review*). All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5,000 words, and must be received not later than May 1, 1948. The winning essay in the 1947 contest appears in the January 1948 issue of the *Mississippi Valley Medical Journal* (Quincy, Illinois).

Further details may be secured from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209-224 W. C. U. Building, Quincy, Illinois.

CALLING ATTENTION TO
Items of Possible Interest to Friends of Chauncey D. Leake

November, 1947

1. TOO MANY BOOKS? W. C. Halstead sensibly discusses *Brain and Intelligence* (Univ. Chicago Press, '47, 430 pp., $10). H. H. Anderson & Co. offer reference book on *Pharmacology and Experimental Therapeutics* for doctors, dentists, and vets. (Univ. California Press, Berkeley, '47, 370 pp., $6.50). F. A. Mettler edits Cecilia Mettler's *History of Medicine*, a reference work arranged by broad subject (Blakiston, Phila., '47, 1245 pp., $8.50). E. F. Adolph & Co. review *Physiology of Man in the Desert* (Interscience, N. Y., '47, 370 pp., $6.50). W. Dock and I. Snapper edit Vol. 2 of *Advances in Internal Medicine* (Interscience, N. Y., '47, 652 pp., $9.50). C. S. Venable and W. G. Stuck ably discuss *The Internal Fixation of Fractures* (Thomas, Springfield, Ill., '47, 241 pp., $5.50). D. E. Lea describes *Actions of Radiations on Living Cells* (MacMillan, '47, 402 pp., $4.50). S. A. Goudsmit in *Alsos*, pulls a cloak and dagger on tracing German science secrets (Schuman, N. Y., '47, 210 pp., $3.50). O Larsell gives the medical history of Oregon in *The Doctor in Oregon* (Oregon Hist. Soc., Portland, '47, 980 pp., $10). G. Murphy discusses *Personality: A Biosocial Approach to Origins and Structure* (Harper's, N. Y., '47, 1010 pp., $5). M. D. Kamen describes *Radioactive Tracers in Biology* (Academic, N. Y., 294 pp., $5.80). C. K. Drinker & Co. review *Psychiatric Research* at dedication of McLean Hospital Biochem. Lab. (Harvard Press, Cambridge, '47, 113 pp., $2). W. Weaver tells how *The Scientists Speak* (Boni, N. Y., '47, 382 pp., $3.75). G. H. Twombly edits *Symposium on Endocrinology of Neoplastic Diseases* (Oxford Press, N. Y., '47, 398 pp., $11). L. C. LeCron and J. Bordeaux describe *Hypnotism Today* (Grune & Stratton, N. Y., '47, 278 pp., $4). W. H. S. Jones translates and edits the medical writings of Menon, pupil of Aristotle (*Medical Writings of Anonymous Londinensis*, Cambridge Univ. Press, '47, 168 pp., 25 s), containing valuable note on nature of Greek medicine. Noteworthy for fine scholarship in M. H. Fisch's study of *Nicolaus Pol Doctor 1494* (H. Reichner, 34 E. 62nd St., N. Y., '47, 256 pp., $7.50). Excellent is the cooperative effort between E. A. Strecker, F. G. Ebaugh, our J. R. Ewalt and L. Kanner in *Practical Clinical Psychiatry* (6th ed., Blakiston, Phila., 486 pp., $5). E. J. Dingwall notes *Some Human Oddities: Studies in the Queer, the Uncanny, and the Fanatical* (Home, London, '47, 198 pp., 15s). J. Cyriax discusses *Rheumatism and Soft Tissue Injury* (Hamilton, London, '47, 406 pp., 42s). H. Gruneberg writes on *Animal Genetics and Medicine* (Hamilton, London, '47, 308 pp., 21s). F. W. Bancroft and C. Pilcher edit *Surgical Treatment of the Nervous System* (Lippincott, Phila., '47, 611 pp., $25). If your library doesn't have Beilstein, better order *Elsevir's Encyclopedia of Organic Chemistry* (Elsevir, N. Y., '47 plus, 20 vols., 38 parts, $6 per 100 pp.).

2. PHYSIOLOGICAL? P. D. McMaster indicates that a pressure gradient is significant in lymph formation in health and disease (*J. Exp. Med.* 86:293, '47). G. Malmstrom suggests standardized cardiological anoxemia test (*Acta Med. Scand. Suppl.* 195, '47, 103 pp.). W. R. Hess shows that diencephalon representation of autonomic function is not discretely delimited but diffuse, indicating broad co-ordination (*Suppl. 4 Helv. Physiol. Pharmacol. Acta* '47, 65 pp. and atlas). K. G. Stern describes nucleoproteins and gene structure (*Yale J. Biol. Med.*, 19:937, '47). J. A. Barclay & Co. emphasize secretion with filtration and reabsorption in kidney function (*Acta Med. Scand.* 128:500, '47). R. H. Orton confirms A. E. Guedel's claims (*Anesth. and Analg.* 13:263, '34) for controlled respiration in anesthesia (*Med. J. Austral.* 2:255, Aug. 30, '47). C. H. Kellaway discusses factors in liberation of histamine in tissue injury (*Edin Med. J.* 54:333, '47). A. Nilzen notes decrease in skin and blood histamine in urticarial outbreak (*Acta Dermat. Ven.* 27:Suppl. 17, 67 pp., '47). F. W. Clements' *Bancroft Oration* covers chronic malnutrition in children (*Med. J. Austral.* 2:225, Aug. 23, '47).

3. PHARMACOLOGICAL? M. Stacey & M. Webb discuss antibacterial action of bile acids and derivatives of cholane (*Proc. Roy. Soc. B.* 134:523, 538, '47). J. F. Fulton in commenting on Morton's ether demonstration, salutes the vision and daring of youth (*Anesth.* 8:464, '47). R. W. Gerard discusses anesthetics and cell metabolism (*Anesth.* 8:453, '47). S. Moeschlin surveys mechanism of urethane action in leukemia (*Helv. Med. Acta* 14:279, '47). J. F. Danielli & Co. describe "Bal-intray" (dithio propanol glucocide) as a non-toxic thiol for IV use in arsenical poisoning (*Biochem. J.* 41:325, '47—note many other reports on BAL in same issue). J. Boursuell & Co. describe use of radioactive isotopes in immunological studies (*Nature* 160:339, Sept. 6, '47). R. J. V. Pulvertaft well discusses air-borne infections (*Brit. Med. J.* 2:517, Oct. 4, '47). T. Francis reviews mechanisms of infection and immunity in virus diseases of man (*Bact. Rev.* 11:147, '47). N. F. MacLagan analyzes value of phosphatase and thymol turbidity tests in diagnosis of jaundice (*Brit. Med. J.* 2:197, Aug. 9, '47). S. E. Luria notes reactivation of irradiated bacteriophage by transfer of self-reproducing units (*Proc. Nat. Acad. Sci.* 33:253, '47).

INTER-ISLAND NURSES' BULLETIN

Official Publication of the Nurses' Association, Territory of Hawaii

BULLETIN COMMITTEE

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REPORT OF THE 51st ANNUAL CONVENTION OF THE NATIONAL LEAGUE OF NURSING EDUCATION

MRS. MILDRED PINNER, R.N., M.S.*

The fifty-first annual convention of the National League of Nursing Education was held in Seattle, Washington, September 7 to 11, 1947. Thirty-two State Leagues, and two representatives from Hawaii,† answered roll call. The audience seemed delighted with the idea of accepting Hawaii into the National League of Nursing Education.

Some revisions of the by-laws included: *Dues* (Article VIII) which were changed from $4.00 for the first year for new members to $5 for all active members. *Membership:* (Article I, Section 2-A). It was recommended that Article I, Section 2-a (1), (2), and (3) be eliminated and that eligibility for League membership be based upon the applicant's eligibility for state licensure. This recommendation was discussed but postponed for re-wording and consideration at the convention of 1948. *Regarding Article IV,* a request was made for re-interpretation of section 1-K and it was agreed that in processing applications, it would be the responsibility of the State and Local Leagues to accept new members upon the recommendations of the Committee on Eligibility in all cases except those presenting problems. Such cases are to be submitted to the Board of Directors of the State or Local Leagues.

Transfer of membership from one state league to another, or to and from headquarters, will be handled by headquarters entirely, and the transfer card used by state leagues eliminated.

Concerning payment of dues, if a member has paid dues for the current year before transferring to another state, membership will be recognized, a new card issued and full membership privileges granted without further payment of dues. If a member transfers before paying dues for the current year, payment will be made to the transfer district. Further, new members whose dues are paid in the last three months of the year will be carried as paid-up members for the following year. It was recommended that lapsed members re-instated after September first be carried over as paid-up members for the following year, but this recommendation was not passed.

The Council voted to dispense with history cards. However, they will be continued in the Territory of Hawaii because of the limited membership, and present position of the member will be included.

In the matter of dues, it was felt that state-wide programs should be carried on to make money for the various Leagues. The New Jersey State League has increased dues to $10.00 a year and in addition has raised funds by sponsoring fairs, hobby shows, and white elephant sales.

The responsibility of the state and local Leagues in organization and development of programs for practical nurses was discussed. It was agreed that the best programs were those under the direct supervision of graduate nurses. It was considered advisable for study groups to be formed to consider the various problems facing nursing education today in order to arrive at a common stand. This has been done to some extent. It was felt that another study group should be formed to consider faculty positions for schools of nursing.

The opening business meeting was held on Monday morning, September 8. All of the reports will appear as reprints in the Annual Report of the National League of Nursing Education. The Monday afternoon meeting considered the "Nursing School Library." Mrs. Emily C. Cardew,

* Director of Nursing Education, St. Francis Hospital School of Nursing, Honolulu; President (pro tem), Territory League of Nursing Education; Hawaii Delegate to NLNE Convention.

† Miss Virginia Jones, R.N., M.S., President, Nurses' Association Territory of Hawaii, second delegate to NLNE Convention.

Director of the Education Department, St. Luke's Hospital, presided.

The general session held at the Moore Theatre was open to the public. Miss Sleeper, President, presided. The invocation was given by Reverend Harold Small, President of Seattle College and the addresss of welcome by Elizabeth Smith, President of the Washington State League of Nursing Education. Dr. Raymond B. Allen, President of the University of Washington gave an address on "Health Sciences and Nursing Education." Following this the Mary Adelaide Nutting Award was presented to Miss Isabel Stewart for outstanding contributions in nursing. Miss Sleeper then accepted the Territory of Hawaii League of Nursing Education. The response was given and leis presented to Miss Sleeper, Miss Smith, Miss Mayo and Dr. Allen.

The Tuesday morning session was devoted to "Guidance Programs in Schools of Nursing." Phoebe Gordon of the University of Minnesota School of Nursing was the speaker. She pointed out that selection of students, health of students, faculty and staff consultations are three major factors in guidance programs. Also, that everyone in the hospital field is responsible for student guidance.

The nursing school budget was also discussed, with Miss Waagen, Hospital Nurse Consultant, as the main speaker. She advocated a separate budget for nursing service and the school. Maintenance is 2/3 of the costs of students. About 17 per cent of the cost of nursing education is paid by the student and 3 per cent by other sources.

During the afternoon session the film "Found in Hawaii" was shown to an audience of about 400. Later there was a round table discussion on "The Structure of National Nursing Organizations." It was brought out that through unity and more adequate support of our organizations, greatly improved nursing service should result. The League has been the leader in nursing education in all of its aspects. It was felt that lay participation is of great value and should be considered with regard to membership.

Part of the afternoon was devoted to "Administrative Problems in Guidance Programs" on which subject an excellent discussion was given by Sister John of the Cross. Sister Dolores Marie gave a report on testing programs to provide information on personality, aptitude and interest evaluations. The Wexler Bellevue Test, she feels, is the best individual test. She stressed the importance of religion in the education of our students as a basis for developing a life philosophy.

The evening session was concerned with "New Emphases in Public Relations," and Mrs. Elizabeth Soule of the University of Washington was presiding officer. A symposium on public relations and the school of nursing, with Miss Harriet Smith as chairman and H. G. Halstead, Washington State Director of Vocational Education, Edith B. Nelson, Washington State Employment Service, and Henrietta Doltz, Director of Department of Nursing, University of Oregon Medical School, participants, brought out the needs of public relations in schools of nursing as well as in nursing organizations.

The Wednesday morning session was devoted to student nurse recruitment programs. Miss Anna D. Wolf of Johns Hopkins presided. Miss Hocking, Coordinator of Women's Occupations in Seattle, spoke on "Blue Printing Careers." Mrs. Corrington, Nursing Specialist of the American Hospital Association, brought out the importance of recruitment to the nursing profession. In January 1947 there were 17 per cent fewer students in accredited schools of nursing. For lack of personnel, 23,000 hospital beds are no longer available to the public. While schools of nursing have been more selective in their students since January 1946, it is felt that in part decreased enrollment is due to lack of motivation. Interest in nursing must be stimulated. The Nursing Information Bureau should emphasize opportunities in nursing. Nursing is an expanding, growing profession and nurses must be responsible for selling their profession.

One meeting was devoted to recruitment techniques in local communities. The State of Iowa had on display a large number of posters that are used there in high schools and colleges. "Building and Understanding of the Curriculum within the School of Nursing" was discussed, with Miss Lorentz of Michael Reese Hospital, Chicago, presiding. Most of the discusion centered on the use of core studies. This method of instruction has been used in collegiate schools, but preparation of instructors is most important if it is to be well utilized.

Esther Brown, Ph.D., Director of the Study of Schools of Nursing, gave a progress report on the study, which has not yet been completed. The results are no different than anticipated from existing problems of schools of nursing at the present time, namely, a shortage of nurses, increased demand for nurses, lack of recruits, qualified personnel for faculty positions. Dr. Brown will undoubtedly have much help to offer for these problems at the completion of her study.

One of the most enjoyable events of the convention was the tea given by the Washington State

League of Nursing Education for the Board of Directors and Council of State Leagues on September 10 at the home of Mrs. Balmer on West Laurelhurst Drive. The Board of Trustees of the Children's Orthopedic Hospital served as hostesses. Many of those present have good friends in Hawaii.

The closing business meeting was held Thursday morning, September 11, and reports of the new officers given. President, Miss Ruth Sleeper; Vice-president, Miss Hazel Macquin; Secretary, Miss Loughrin; Treasurer, Miss Petry; new Directors, Miss Harrington, Mrs. Jensen, Miss Austin, Miss Heidgerken.

The President asked for an invitation for the next meeting, and since none was forthcoming, requested the various State Lagues to send their invitations to National Headquarters. The convention adjourned at 12:30 on September 11.

FEDERAL SECURITY AGENCY
U.S. Public Health Service
Washington, D. C.

September 11, 1947

Miss Virginia A. Jones
Mabel Smyth Memorial Building
Honolulu, Hawaii

Dear Miss Jones:

You will be pleased to know that the President of the United States has awarded to Mrs. Elmira Bears Wickenden, who served as Executive Secretary of the National Nursing Council for War Service, the Medal for Merit in recognition of her outstanding contribution to the war effort of our country. She is the first nurse and the third woman in the history of the United States to be so honored.

The Medal for Merit is a Presidential award to civilians for "exceptionally meritorious conduct in the performance of outstanding services to the war effort of the United States and of friendly nations." It is considered comparable to the Distinguished Service Medal for members of the armed forces. As you know, the Medal for Merit was established by George Washington in 1782.

At the President's direction, it is my great honor to present the award to Mrs. Wickenden. The ceremony is scheduled for Wednesday, September 17, 11 A.M., Washington, D. C.

Sincerely yours,

THOMAS PARRAN
Surgeon General

* * *

ELMIRA BEARS WICKENDEN, for exceptionally meritorious conduct in the performance of outstanding services to the United States from October, 1941 to December, 1946. Mrs. Wickenden, through her twenty-five years of experience and background in the field of nursing, pointed out to the Nation the need for a unified nursing profession in the effective prosecution of the war. Her superior organizing talent and energetic action led to the establishment of the Nursing Council on National Defense, which later became the National Nursing Council for War Service. As Executive Secretary of this organization, she coordinated the war-time programs of thirteen national organizations as they affected nursing service, and brought them to a realization of their part in maintaining the health and saving the lives of the armed forces and civilians. In addition to her efforts in helping to provide the record-breaking total of more than 100,000 nurse volunteers and more than 76,000 nurses actually assigned by the Army and Navy, she led the Council in taking the initial steps toward the establishment of the United States Cadet Nurse Corps, which enrolled 179,000 student nurses. She aided the nursing organizations to accelerate the procurement of personnel and the training of nurses when mobili a-tion was at a critical stage, and the tremendous conversion of civilian population difficult. This contribution was an immeasurable one, and was possible only because of her profound insight into the needs of the Services and her vast knowledge of the potentialities of the nursing profession. Under her leadership, groundwork was laid for unified postwar action to provide adequate nursing service for the American people. As a result of her outstanding leadership in the field of nursing, she was appointed by the President as nurse advisor to the United States Delegation, World Health Organization, in June 1946. Mrs. Wickenden's conduct and achievements, her devotion to the cause of her county, and her complete disregard of personal gain reflect the highest credit upon herself, her profession, the Government and the people of the United States.

THE WHITE HOUSE
July 16, 1947

* * *

AMERICAN NURSES' ASSOCIATION

November 4, 1947

Miss Virginia A. Jones, President
Nurses' Association, Territory of Hawaii
510 South Beretania St.
Honolulu 53, Hawaii

Dear Miss Jones:

This will acknowledge receipt of your letter of October 21st in which you enclosed a bank draft in amount $357.50 (representing approximately 50 cents a member) which has been contributed by the Nurses' Association of the Territory of Hawaii for the rehabilitation of the American Nurses' Memorial Florence Nightingale School of Nursing, Bordeaux, France.

On behalf of the Committee I wish to take this opportunity to express deep appreciation for the interest and cooperation of the members of your Association in giving the Bordeaux School. this financial assistance. It is indeed gratifying.

ELNORA E. THOMSON, R.N.
Chairman, Advisory Committee to the American Nurses' Memorial Florence Nightingale School of Nursing, Bordeaux, France

AMERICAN RED CROSS NURSING NEWS LETTER

National Staff Appointments

Ruth Freeman, administrator of Nursing Services, has announced a partial list of appointments to the staffs of national headquarters and area offices.

Ann Magnussen, director of nursing for the eight states of Southeastern Area, becomes director of disaster nursing and enrollment. Annabelle Petersen has been appointed assistant director of enrollment. In continuous Red Cross service since 1920, Miss Petersen has served until recently as assistant to the director of Nursing Services at national headquarters.

Eula B. Butzerin, formerly an educational consultant on home nursing, has been appointed assistant director of Home Nursing. Ellen L. Aird becomes educational consultant on home nursing after serving as training assistant in that program.

Ella B. Gimmestad, in Red Cross service for 18 years, has been appointed assistant director of nursing in charge of technical aspects of the nurse's aide program. For the past several years, she has held the post of nursing director on the Disaster Service staff.

Three area nursing staffs will have new directors September first, each with wide experience in Red Cross nursing programs. Jeanie Adkerson, former North Atlantic Area nursing director, New York, N. Y., assumes a similar assignment in the Southeastern Area Office, Atlanta, Ga. North Atlantic Area deputy director Frances Crouch is now the director of that area, which covers nine states.

Irene Thompson, deputy nursing director, Midwestern Area Office, St. Louis, Mo., has been appointed director of the Pacific Area Nursing Service, San Francisco, Calif., which includes eight states and Alaska. She succeeds Portia Irick, who has resigned to become director of Public Health Nursing in New Mexico.

Virginia Elliman and Lona Trott, both former members of the national headquarters nursing staff, continue as directors respectively of Eastern Area, covering seven states and the District of Columbia; and Midwestern Area, comprising 17 states.

Polio Scholarship Nurses Serving in Present Outbreaks

Red Cross chapters recruited 25 nurses beyond local resources for polio duty during the first three weeks in August. The requests were the first received by the organization for new 1947 cases and came from four widely separated sections of the United States. The majority of nurses recruited were experienced in polio care and were among those recommended for scholarships to the spring 1947 hospital training courses offered by the National Foundation for Infantile Paralysis. During the 1946 outbreaks of poliomyelitis, the Red Cross recruited 2,573 nurses beyond local resources. They were paid by the NFIP.

International Visitors Study Red Cross Programs

A group of international pediatricians, an Iranian princess directing social service in her country, and a Chinese nurse on an International Health Division fellowship, were among the visitors from abroad studying Red Cross nursing policies and procedures during August.

The doctors, representing 36 countries and their respective Red Cross societies, were in Washington for a week as guests of the Red Cross following the International Pediatrics Conference in New York City. All phases of Red Cross health and safety programs as well as Junior Red Cross educational programs were observed in the series of forum discussions.

Princess Ashraf Pahlavi, twin sister of Shah Mohamed Reza Pahlavi, ruler of Iran, spent two weeks in Washington at the invitation of the American Red Cross observing social welfare methods of public and private agencies. Director of Iran's new Imperial Social Service Organization, she hopes to develop needed orphanages, hospitals and clinics in her country. On her return to Iran, she will establish a school of nursing at Teheran. In the time spent at Red Cross national headquarters, she expressed particular interest in home nursing techniques.

Virginia Lu, supervisor of a municipal tuberculosis center in Nanking, China, spent a week in August observing Red Cross health programs and organization at national headquarters, in area offices and during chapter classes. She has had wide experience in the field of public health nursing in China.

Red Cross Nurses Invited to Apply for Return of Personal Papers in Enrollment Files

In the process of adapting its nurse enrollment program to peacetime needs, the American Red Cross plans to reduce the materials in the national nurse enrollment and recruitment files.

These files contain a variety of papers that the enrolled nurses may wish to have preserved. These include, in many instances, confidential work references, school of nursing credentials, birth certificates or other evidences of citizenship and other legal documents.

School of nursing credentials or other confidential work references cannot be released to the in-

dividual nurse, but may be turned over to any nurse placement agency or returned to the school of nursing. Other material that the nurses desire will be returned to them. The Red Cross is urging that nurses make prompt request for its return.

Army nurses who served in World War II need not request material to be returned inasmuch as this data has been transferred to the Army Nurse Corps for their permanent files. Personal data of navy nurses of World War II may be returned on request to Red Cross. Confidential material has been sent to the Navy Nurse Corps files.

Requests for the return of material should be addressed to Ruth B. Freeman, Administrator, Nursing Services, American National Red Cross, Washington 13, D. C.

Historic material concerning the Red Cross Nurse Enrollment Service and the files of individuals prominent in general nursing and Red Cross nursing will be retained in the Red Cross archives.

NURSING CARE STUDY OF A PULMONARY TUBERCULOSIS PATIENT

Emiko Kinjo*

Mr. C. particularly interested me because I had known him as a patient at Kuakini Hospital before he was admitted to Leahi Hospital with the diagnosis of advanced pulmonary tuberculosis. He had previously been admitted to Kuakini Hospital to have an appendectomy performed under local anesthesia. Since this was an uncommon occurrence in our surgery I wondered why this type of anesthetic was chosen. Since coming to Leahi I have learned that Mr. C. might (under general anesthesia) have suffered respiratory embarrassment during surgery due to the weakened condition of his lungs. He might also have spread the infection throughout his lung tissues by aspiration of infected material to unaffected parts, had he been given a general anesthetic.

Mr. C. is a young Japanese man of modest and solemn nature, and has become one of the most cooperative patients in the ward. He was raised in a plantation home on the island of Hawaii in a family which consisted of his parents, his two brothers and himself. His educational opportunities were neglected because of ignorance and lack of interest on the part of his parents, so Mr. C. left school after completing only the seventh grade. To satisfy his parents he worked on the plantation as a laborer. Although there was no actual financial difficulty there was little money for other than the necessities of life. In addition there was turmoil and instability in the family environment and finally his mother divorced his father.

At the age of nineteen Mr. C. left his unhappy home to seek adventure and a better occupation and made Honolulu his choice. At Schofield he secured a position as a clerk and remained there for two years. Unfavorable as his home situation had been, he found in his new environment little improvement. He adjusted to his independence and to city life with great difficulty. At the end of two years he changed his occupation to that of "fry cook" and for the next three years his working conditions were most unpleasant. In a constant atmosphere of penetrating heat and smoke and the perpetual sight and odor of food, it is not surprising that Mr. C. suffered from anorexia or loss of appetite. Like most young men he craved soda pop, sweets and steaks and soon his meals became "snacks." Discipline in good dietary habits had been sadly neglected during his childhood and he could not realize that the lack of fruits, milk and vegetables would be a predisposing cause toward the dreadful diagnosis of tuberculosis. These foods, so necessary to the maintenance of body repair and growth, are also essential as a factor in building up resistance against disease.

Another vital factor which was to play an important role in undermining Mr. C.'s health was the matter of rest. By rest we mean sleep, and our young patient in his pursuit of pleasure and adventure was frequently limiting his daily rest to 3 or 4 hours of "naps" and "snoozes."

Although Mr. C. did not recognize as unusual his failing appetite, and the fatigue he attributed to lack of sleep, we can readily see that he already manifested two clinical symptoms of tuberculosis. He was depressed mentally and he had not adjusted easily from plantation life to life in the congested area of Honolulu. His dietary habits were bad and his rest routine faulty. Many of his friends lived in similar conditions and he was not alarmed because he was not feeling up to par.

In 1945, during the course of draft induction, Mr. C. had an x-ray of his chest and a diagnosis of arrested tuberculosis was made. This means that tubercle bacilli had invaded his lung tissues and, because of his lowered body resistance, had secured a small foothold before they had been walled off by his decreased body defenses. Such lesions are readily apparent to the radiologist who is expert in the reading of chest x-rays.

Mr. C. was referred to the Rehabilitation Unit in the Territorial Armory and was alarmed by the request to report monthly to the Lanakila Chest Clinic. He had no chest pain, he did not cough and he had had no hemorrhages. Only the explanation of his x-ray films convinced him that he was indeed a victim of the dreaded tuberculosis.

At this time the lesion in his chest was small and it is not unusual that clinical symptoms were not manifested. Mr. C. had only minimal lesions in the first intercostal space of the right lung and in the second intercostal space of the left lung. Early in 1946, however, symptoms of coughing, undue fatigue and slight fever became apparent. X-ray now showed considerable spread of the tuberculosis lesion in the right upper lobe and a contralateral spread in the left lung extending to the fourth intercostal space. Tests of gastric washings which had been negative up to this time now became positive for the tubercle bacillus. This indicated that Mr. C.'s lesion was exudative and as a result his cough became productive. Sputum contained the tubercle bacilli and necrotic material.

In February, 1946, Mr. C. had an attack of acute pain in the right lower quadrant and although he was on the waiting list for Leahi, he was admitted to Kuakini General Hospital. Here his appendix was removed under local anesthesia. On the second post-operative day he suffered a small hemoptysis accompanied by chest pain. This occurrence can be explained by the fact that hemorrhage in tuberculosis is due to the break-down of blood

* Student Nurse at Kuakini General Hospital.

This nursing care study was prepared by Miss Kinjo during her student affiliation at Leahi Hospital. It demonstrates a typical patient with pulmonary tuberculosis.

vessels in lung tissue and often follows sudden exertion such as coughing or exercise. In our patient, considerable coughing was experienced after his operation and he had frequent night sweats.

After six days he was transferred to Leahi Hospital where regular post-operative care was given. On his second day at Leahi Hosptal some diarrhea was noticed and bismuth and paregoric, drams one, were administered. He was carefully watched for the possibility of a tuberculous peritonitis or any indication of infection of the gastro intestinal tract. This is a serious complication and may result from swallowing of sputum which contains tubercle bacilli. Fortunately the diarrhea cleared up in a few days and our patient began to feel better both mentally and physically.

After six months of bed rest and routine tuberculosis nursing care, Mr. C. had no complaints of chest pain or discomfort. He was still coughing and his expectoration consisted of about 2 ounces of mucopurulent material daily. His diagnosis was pulmonary tuberculosis, active and moderately advanced, and of caseous, pneumonic nature. This type of tuberculosis results when infectious material is spread throughout the lung tissue from a smaller lesion. An acute inflammatory condition or pneumonitis may result or cavities may form. Sometimes the tubercles are so closely united that they appear homogeneous in character and the term "caseous" is used to describe the cheesy appearance. Healing of tuberculosis lesions may be accomplished by several distinct mechanisms. Active inflammatory lesions may undergo resolution, the resolved exudate disappearing through absorption, or by means of expectoration. Caseo-necrotic lesions absorb slowly and slightly, if at all. If the cheesy material undergoes liquefaction and absorption, cavities form in the lung tissue. When these necrotic lesions are small they may dry out slowly leaving a fibrinous capsule. In Mr. C.'s case, the diseased areas of tissue were extensive and involved both lungs. For these reasons surgery was contraindicated. Healing must take place slowly and this could be accomplished only through building up body resistance and maintaining a rigid rest routine.

Careful and attentive tuberculosis nursing care was required, and mental reassurance was vitally necessary to secure Mr. C.'s cooperation. He could not understand, in the early weeks following his operation, why he was required to conserve his strength by eliminating all exercise when he felt so well. After careful explanation of the nature of his illness, he became most cooperative. He now realizes that sleep, a good diet, freedom from worry and excitement and rest are essential to his recovery. The family emotional conflict which surrounded him in his youth does not now disturb him. Because of his social and economic status, he has been accepted as a free-clinic patient and has been freed from the problem of financial worry. He enjoys his meals and the light recreation of reading and listening to the radio programs provided. Above all he is anxious to speed his recovery by following the instructions of his physician.

Mr. C. is very careful in the matter of "tissue technique," although he had to be carefully instructed on admission. Because of the highly infectious nature of his expectoration it was explained to him that he must cover his mouth and nose while talking, sneezing or coughing, and must at all times protect from infection those who are trying to aid him in his recovery.

By studying this patient having pulmonary tuberculosis, I have learned much regarding the disease itself. I have learned also to regard the patient as an individual and as having individual problems, needs and characteristics. Through actual experience with a patient I have learned the necessity of adequate and intelligent nursing procedures and the value of a successful psychological technique.

After learning that the cost of hospitalizing one pulmonary tuberculosis patient is estimated at about $1,800 per year, excluding the cost of treatments and medication, I have been impressed by the financial problem this disease presents. It is only by intelligent care of, and instruction to, the tuberculosis patient and his family that this dreadful disease can be eliminated from the community.

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HAWAII COUNTY NURSES

Miss Pollock, who has spent 14 years in YWCA work in China, and is now associated with the Hilo YWCA, gave an interesting lecture on rural health in China at the November meeting of the Nurses' Association. The lecture was illustrated with many excellent pictures.

One of the charter members of the Hawaii County Nurses' Association, *Mrs. Lizzie Nicol*, is now retired and living in England. As a Christmas gift the Association voted to send her a CARE package. Miss Jean MacDonald was instrumental in collecting clothing to send her also. We know Mrs. Nicol will find many in England who will welcome an extra garment or two.

VACATION ITEMS: *Mrs. Thelma Patten* left on November 9 by plane for an indefinite visit with relatives in Connecticut. *Miss Annette Hammersland* spent two weeks in Honolulu. Her niece from Iowa arrived in time for the Aloha Week celebration and returned to Hilo to spend several months with Miss Hammersland. *Miss Winifred Golly* of the Board of Health has been in Honolulu for a week on a combined business and pleasure trip. *Mrs. Katherine Burso* of Puumaile is spending two weeks in Honolulu as the guest of her son Dr. A. Burso. *Miss Ellen Renshaw* has just returned from a two-month trip to the mainland and is back on duty as night supervisor at Puumaile. After a year in the islands, *Miss Joan Freyereisen* and *Miss Ruth Murphy* have returned to their homes on the mainland. They were employed at Puumaile. *Miss Agnes De Vries* and *Miss Tomasek* recently joined the staff of Pahala Hospital. *Miss Florence Terry* of Seattle, Washington, is a new member of the Puumaile Hospital staff, as is also *Mrs. Barcelona* who has been at Pepeekeo Hospital during the past year.

CITY AND COUNTY OF HONOLULU

Children's Hospital

New staff nurses:

Eileen Millar (Evanston Hospital, Illinois)
Virginia Morrison (St. Luke's Hospital, Missouri)
Ruth Yamanaka (Queen's Hospital, Honolulu)
Carol Gill (Children's Hospital School of Nursing, Denver)
Francesca Kehlor (Hospital of Good Samaritan, Los Angeles)
Eunice Wade (St. Joseph's Hospital, Minnesota)
Lois Prothero (Hospital of Good Samaritan, Los Angeles)
Isabel Medeiros (Bethesda Hospital, Ohio)
Naomi Febre (Morningside Hospital, Oklahoma)
Dorothy Lukowski (Mercy Hospital School of Nursing, Ohio)
Elsie Shawver (St. Anthony's School of Nursing, Oklahoma)
Mildred Stallings (San Diego County, California)
Carolyn Zeller (Queen of the Angels College of Nursing, Los Angeles)
Helen Rice (Providence Division of School of Nursing Education of Catholic University of America, Washington, D. C.)
Jane Tugend (Edward J. Meyer Memorial Hospital, New York)
Betty Nugent (Methodist Hospital School of Nursing, Indianapolis)
Faye Golden (Methodist Hospital School of Nursing, Indianapolis)
Bernadeen Patrick (Methodist Hospital School of Nursing, Indianapolis)
Hermina Eiteljorge (Methodist Hospital School of Nursing, Indianapolis)

Kapiolani Maternity and Gynecological Hospital

A halloween party was held by the staff nurses at the Nurses' Home on October 31. The affair was well attended and enjoyed by all.

Misses Audrey Scales, Marie Rollo, Verdi Spinken, and Molly Matsuoka were honored at a farewell dinner recently. All four left for the mainland. Others who left the staff recently were Misses Elizabeth Vicary, Margaret Bloom, Katherine Avill, Maxine Howard and Arlene Albi.

Mrs. Agnes Planap, night supervisor, returned to her position after spending six months touring the mainland with her husband.

Many newcomers to the Nursing Staff have been welcomed recently:

Hisae Shiraki (Queen's Hospital, Honolulu) has returned after taking graduate work at the Margaret Hague Maternity Hospital, New Jersey
Fannie Lou Parker (University of Maryland School of Nursing, North Carolina)
Bernice Lillie (St. Peter's Hospital, Minnesota)
Ethel Van Sickle (Newman County Hospital, Kansas)
Beverly Warner (St. Mary's College of Nursing, California)
Faye Swan (Stanford University Hospital, California)
Onalee Sheaffer (Baptist State Hospital, Arkansas)
Clara Seibold (Providence Hospital, Washington)
Jeanette McGinley (St. Paul School of Nursing, Minnesota)
Phyllis Marnie (Los Angeles General Hospital, California)
Anne Lutz (University Hospital of Baltimore, Maryland)
Leila Weitz (Franklin Hospital, California)
Pauline Land (Christian Welfare Hospital, Illinois)
June Long (St. Patrick Hospital, Montana)
Margaret Jahn (Swedish Hospital, Washington)
Bessie Kondo (Queen's Hospital, Honolulu)
Barbara Muronaka (St. Francis Hospital, Honolulu)
Joanne Healy (Mercy College of Nursing, California)
Arlysa Helen Wescher (Milwaukee County Hospital, Wisconsin)
Margaret Harshman (University Hospital of Baltimore, Maryland)
Beth Hankammer (Lutheran Hospital, Ohio)
Jean Guthrie (Glenvale Hospital, Ohio)
Virginia Goyette (Mercy College of Nursing, California)
Lois Firestone (Bishop Johnson College of Nursing, California)
Gladys Evenson (Kahler School of Nursing, Minnesota)
Rebecca Enghoron (Mrs.) (St. Lawrence School of Nursing, Michigan)
Mary E. Brown (Mrs.) (Knapp College of Nursing, California)
Dorothy Jean Tassey (Bishop Johnson College of Nursing, California)

Leahi Hospital

A family study conference was presented by seven affiliating student nurses in the Leahi classroom on Monday, October 27. The students from St. Francis and Kuakini Schools of Nursing climaxed a two-month course in tuberculosis nursing by preparing this conference under the guidance of Miss Elsie Ho. The patient was selected from a ward to which all the students had been assigned for clinical experience so that they all had an opportunity to become acquainted with this tuberculous patient and his family.

Objectives for student participation in such a family study are to given an understanding of:

1. The tuberculous patient as an individual, a member of a family, and a member of the community from which he came and to which he will return.
2. The emotional and psychological problems associated with tuberculosis.
3. The health, social and economic factors associated with tuberculosis.
4. The importance of the tuberculosis hospital as an integral part of the community in the tuberculosis control program.

Areas covered by such a family study include a brief discussion of etiology, mode of transmission, epidemiology, familial and racial susceptibility, symptoms, diagnosis, treatment and social, emotional, medical and nursing problems of the tuberculous patient and his family. Much emphasis is placed on the role of health education in a tuberculosis control program.

The students prepare a variety of illustrative material to make these conferences interesting and informative. At the recent conference, a diet poster and diet manual, diagrams and x-rays showing types of collapse therapy used at Leahi, and National Tuberculosis Association literature were used.

Twenty-one visitors from the staffs of Leahi, Kuakini, St. Francis and the Board of Health attended the family study conference.

New graduate nurses on Leahi staff are:

Nadine Marie Carpenter (Youngstown Hospital, Ohio)
Lourdes Zambori (St. Louis City Hospital, Missouri)

Irene Markovitz (Atlantic City Hospital, New Jersey)
Evelyn Rud (Norwegian American Hospital, Illinois)
Helen Clifford (Mercy Central School of Nursing, Michigan)
Tamie Oka (St. Francis Hospital, Honolulu)
Doris Shiroma (St. Francis Hospital, Honolulu)

Leahi Hospital was happy to welcome back two former students who are now on the graduate staff. Miss Oka was an affiliating student in March-April 1946 and Miss Shiroma was a graduate student in the October class. The latter has just completed a year's service at Mahelona Hospital, Kauai.

St. Francis Hospital

The following graduate nurses became members of the nursing staff in October:

Ruby M. Beatty (St. Joseph's School of Nursing, Washington)
Delores Claire Blankenfeld (Merritt Hospital, California)
Jeanne B. Hillen (Mounds Midway School of Nursing, Minnesota)
Eve Florence Kapp (St. Joseph's Hospital School of Nursing, Washington)
Helen Donair McGillivray (Queen of the Angels College of Nursing, California)
Alice Marie O'Brien (St. Joseph's Hospital, Minnesota)

Two of the graduates of St. Francis Hospital became staff members in November after several months on duty in mainland hospitals. Miss Jeanette Seo who has had post-graduate study at Marquette University, will become supervisor in pediatrics at St. Francis Hospital. Miss Satsuko Kawamoto will resume her duties in the obstetrical division. For the past several months she has been at St. Joseph's Hospital in Milwaukee, Wisconsin.

Queen's Hospital

The Alumnae Association held its annual homecoming on November 29 at the Harkness Nurses' Home. Luncheon was served by the hospital and the affair was well attended. Miss Sadie Ching, Chairman, worked with the following committee members: Reception, Mrs. Patricia Anderson; publicity, Myra Lam; food and decorations, Miss Tamae Takaue; program, Miss Elsie Ho; clean-up, Mrs. Flora Ozaki.

nurses and doctors . . .

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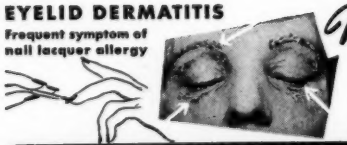

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